Environment and health

Quality of bathing waters

Indicator	EU indicator past trend	Selected objective to be met by 2020	Indicative outlook of the EU meeting the selected objective by 2020
Bathing water quality		Increase the number of bathing waters classified as 'excellent' or 'good' under the Bathing Water Directive	
The share of bathing waters that meet excellent and good quality standards are likely to increase further due to implementation of the Bathing Water Directive, in particular the effect of measures on poor quality waters			

The Seventh Environment Action Programme (7th EAP) includes an objective that, by 2020, citizens throughout the EU will benefit from high standards of bathing water. The Bathing Water Directive requires that Member States take realistic and proportionate measures to increase the number of bathing waters classified as ‘excellent’ or ‘good’. Minimum water quality standards were met by 96.1 % of all EU bathing waters identified for the 2015 bathing season. Overall, bathing water quality is improving over time due to investment in the sewerage system, better wastewater treatment and the reduction of pollution from farms.

For further information on the scoreboard methodology please see Box I.1 in the EEA Environmental indicator report 2016

Setting the Scene

The 7th EAP (EU, 2013) includes an objective that, by 2020, citizens throughout the EU will benefit from high standards of bathing water. Bathing water quality is a cause for concern for public health, as swimming at beaches or bathing lakes contaminated with faecal bacteria can result in illness. The major sources of pollution responsible for faecal bacteria are sewage and water draining from farms and farmland. Such pollution increases during heavy rain and floods, when pollution is washed into rivers and seas, and as a result of overflowing sewerage networks. In addition to good water quality for bathing, clean unpolluted water is required for our ecosystems and to support economic activities such as tourism.

Policy targets and progress

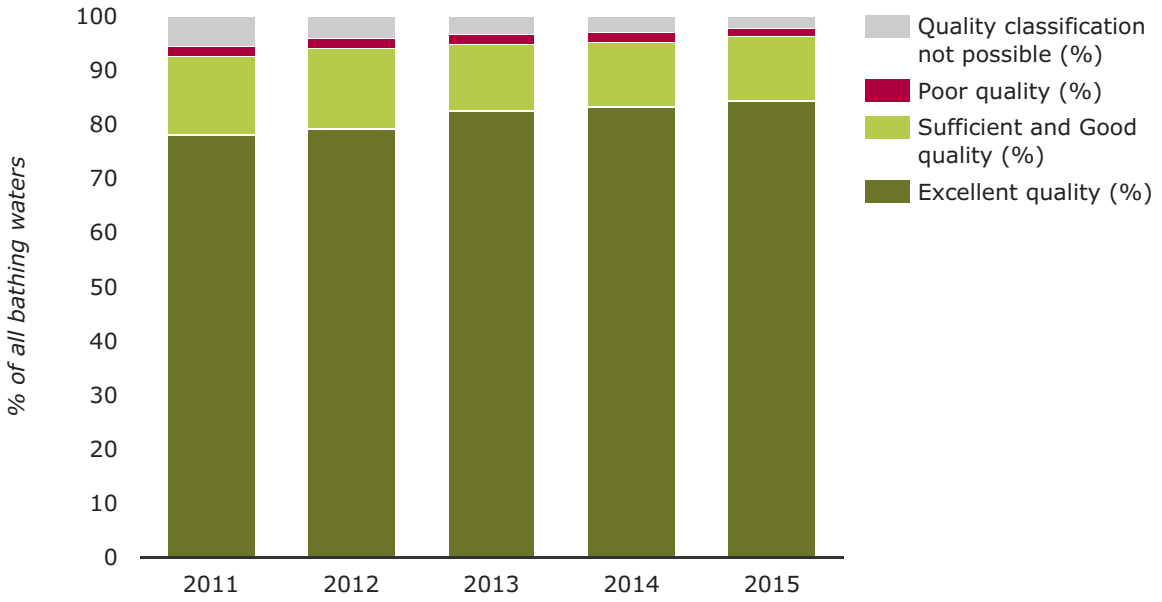
The efforts of the EU to ensure clean and healthy bathing waters started 40 years ago with the original Bathing Water Directive in 1976 (EU, 1976). This was followed by a revised Bathing Water Directive in 2006 (EU, 2006), which updated the measures of the 1976 legislation and simplified its management and surveillance methods. This revised Directive also provides for better and earlier public information about bathing water quality.

The Bathing Water Directive has the aim of increasing the number of bathing waters classified as 'excellent' or 'good'. It also includes a shorter term goal that, by 2015, all waters should have been of at least 'sufficient' quality. In the context of this briefing, and with the aim of linking the objective of the 7th EAP regarding bathing water to the Bathing Water Directive, bathing waters that meet the minimum water quality standards of the Directive (meaning that they were of at least 'sufficient' bathing water quality) are considered to have achieved the high standards called for under the 7th EAP.

Minimum water quality standards were met by 96.1 % of all EU bathing waters identified for the 2015 bathing season, which represents an increase of 0.9 percentage points when compared with 2014. In total, 351 EU bathing waters had poor quality in 2015. The proportion of bathing waters with poor quality dropped to 1.6 % in 2015. This represents a 0.3 percentage point decrease compared with the previous season (EEA, 2016).

Figure 1 provides an overview of the classification of EU bathing waters into the categories excellent, sufficient and poor, as well as those bathing waters that could not be classified, from 2011 to 2015.

Figure 1. Overall bathing water quality in the EU, 2011 to 2015



Note:
Quality classification not possible: not enough samples / new bathing waters / bathing waters with changes / closed

Data sources: EEA. WISE bathing water quality database (data from annual reports by EU Member States)

The share of bathing waters in the EU with excellent status increased from 78.1 % in 2011 to 84.4 % in 2015. The proportion of bathing waters with poor quality remained relatively constant (between 1.6 % and 2.0 %) during the 2011–2015 period (EEA, 2016).

Overall bathing water quality is thus improving over time. It is encouraging to observe that more and more bathing waters are not only reaching the minimum quality standards set by the Bathing Water Directive but are achieving the highest (excellent) quality standards. The outlook towards the 2020 goal is therefore positive.

Many years of investment in the sewerage system and better wastewater treatment, and the reduction of pollution from farms have led to Europe's bathing waters being much cleaner today than they were 40 years ago. The implementation of the Urban Waste-water Treatment Directive (EU, 1991) and a focus on reducing overflow from sewers have been instrumental in reducing pollution and in improving the quality of several low-quality bathing waters (EEA, 2016). However, as figure 1 shows, there are still bathing waters with poor quality. The major sources of pollution responsible for faecal bacteria in bathing waters today are still insufficiently treated or untreated wastewater as a result of system failures, overflows from sewage treatment works or from scattered houses with misconnected drains and poorly located or poorly maintained septic tanks, poorly stored slurry or manure from livestock that washes

into streams, and animal (mostly dog) and bird faeces on beaches or crowded beaches with many swimmers.

In wet summers, large amounts of rainwater affect bathing water quality by causing stormwater overflow and the release of diluted sewage into bathing waters or streams discharging close to beaches. Rainwater also washes animal waste from urban and rural areas into surface water drains and rivers.

Poor water quality can also be caused by misconnected plumbing, whereby foul water such as that from bathrooms or from poorly maintained cesspits and septic tanks enters surface water drains. In years with below average sunshine, water quality is also affected, as the sun's ultraviolet rays kill the faecal bacteria found in the water.

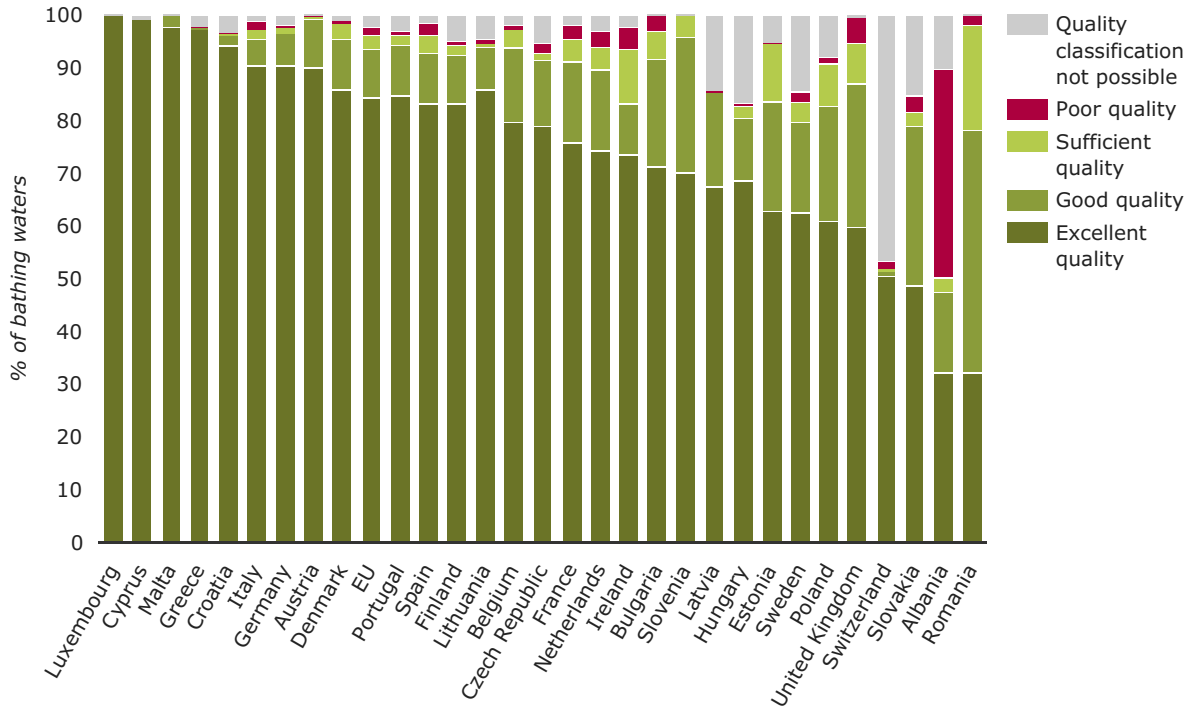
In the case of bathing waters with poor quality, it is imperative that the sources of pollution be assessed. The bathing water profiles prepared under the Bathing Water Directive should provide an indication of pollution sources in the catchment area of the bathing water and, together with historical data on rainfall, stream flow and sea currents, should provide information on the upstream sources of pollution to be targeted with measures. Management measures are primarily implemented for those bathing waters that have only sufficient or poor water quality.

The share of bathing waters that meet excellent and good quality standards is likely to increase due to the implementation of the Bathing Water Directive, in particular the effect of measures for poor quality waters.

Country-level information

Figure 2 provides the results for bathing water quality in 2015 for the EU Member States and two other countries. In general, bathing water quality was of a high standard across the countries.

Figure 2. Bathing water quality for the EU-28, Albania and Switzerland



Data sources: EEA. WISE bathing water quality database (data from annual reports by EU Member States)

Note:
The category "quality classification not possible" includes waters for which there were not enough samples, new bathing waters, bathing waters with changes or bathing waters that had been closed.

All reported bathing water sites in Cyprus, Croatia, Estonia, Greece, Latvia, Luxembourg, Malta and Slovenia achieved at least sufficient quality in 2015 (in accordance with the minimum quality standards set by the Bathing Water Directive). Moreover, in excess of 90 % of bathing water sites were of excellent quality in eight Member States: Luxembourg (all 11 reported bathing water sites), Cyprus (99.1 % of sites), Malta (97.7 %), Greece (97.2 %), Croatia (94.2 %), Italy (90.5 %), Germany (90.3 %) and Austria (90.2 %).

In 2015, there were 383 sites with poor quality bathing water in Europe. Italy (95 bathing water sites or 1.7 %), France (95 sites or 2.8 %) and Spain (58 sites or 2.6 %) were the countries with the highest number of poor bathing water sites.

In some EU Member States, more than 3 % of the bathing water sites had poor quality: 4.9 % or

31 bathing water sites in the United Kingdom, 4.4 % or six sites in Ireland, 3.4 % or 24 sites in the Netherlands and 3.2 % or three sites in Bulgaria (EEA, 2016).

Outlook beyond 2020

Bathing water quality is not only essential for public health reasons, but clean unpolluted water is also necessary to improve ecosystem resilience. Both can be achieved with more integrated and sustainable water resource management. This would require more robust implementation of the Water Framework Directive (EU, 2000), with River Basin Management Plans developed to improve the poorer quality bathing waters. This would serve to maintain the trend towards consistently high-quality EU bathing waters beyond 2020.

About the indicator

This indicator provides an overview of the bathing water quality in 2015 at more than 21 000 bathing waters in the Member States of the EU. It also presents the evolution of bathing water quality from 2011 to 2015. During the bathing season, samples from coastal and inland bathing waters are taken and analysed against two microbiological parameters that may indicate the presence of faecal pollution, namely intestinal enterococci and Escherichia coli(also known as E. coli). After the end of the bathing season, and based on 4 years of data, bathing waters are classified into one of the bathing water quality classes (excellent, good, sufficient or poor). Some bathing waters have not been classified because there were insufficient samples or because they are new or have undergone changes affecting water quality.

Footnotes and references

EEA, 2016, European bathing water quality in 2014, EEA Report No 9/2016, European Environment Agency.

EU, 1976, Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water (archived).

EU, 1991, Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40–52).

EU, 2000, Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1–73).

EU, 2006, Council Directive 2006/7/EC concerning the management of bathing water quality and repealing Directive 76/160/EEC (OJ L 64, 4.3.2006, p. 37–51).

EU, 2013, Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet' (OJ L 354, 28.12.2013, p. 171–200).

> Environmental indicator report 2016 – In support to the monitoring of the 7th Environment Action Programme, EEA report No30/2016, European Environment Agency