

UK bathing water quality in 2018



United Kingdom

June 2019

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Bathing Water Quality in the Season 2018

The United Kingdom

Under the provisions of the [Bathing Water Directive](#), more than 21 000 bathing waters are monitored in Europe each season. The monitoring data and other information regarding bathing water management are reported to the European Environment Agency by 30 reporting countries in Europe, to be assessed for the annual European report and more detailed national reports.

1. BWD reporting in the season 2018

In the season 2018, the United Kingdom identified and reported **644 bathing waters**, which is 2.9% of all bathing waters in Europe. Nine bathing waters have been newly identified for the season 2018. Two bathing waters have been removed from the national list of bathing waters, thus not reported any more in 2018.

Bathing waters of the United Kingdom in the season 2018		Bathing water quality in the season 2018	
Total reported	644	Excellent	407 (63.2%)
Coastal	628	Good	169 (26.2%)
Inland	16	Sufficient	45 (7%)
Total reported samples	9883	Poor	21 (3.3%)
		Not classified	2 (0.3%)

The bathing waters are quality classified according to the two microbiological parameters (Escherichia coli and Intestinal enterococci) defined in the Bathing Water Directive. 96.4% of reported bathing waters are in line with the minimum quality standards of the Directive, thus classified “sufficient” or better. 21 bathing waters are of “poor” quality.

More detailed information on bathing waters of the United Kingdom is available at the national bathing water portals <http://environment.data.gov.uk/bwq/explorer/index.html> (England), <https://www.nidirect.gov.uk/articles/bathing-water-quality> (Northern Ireland), <http://apps.sepa.org.uk/bathingwaters/> (Scotland), <http://environmental-agency.gi/index.php/bathing-water/> (Gibraltar) and <http://environment.data.gov.uk/wales/bathing-waters/profiles> (Wales).

2. BWD monitoring

Each bathing water that is identified by the reporting country needs to have a monitoring calendar established before the bathing season. The monitoring calendar requirements can be summarised as follows: (1) a pre-season sample is to be taken shortly before the start of each bathing season; (2) no fewer than four (alternatively, three for specific cases) samples are to be taken and analysed per bathing season; and (3) an interval between sampling dates never exceeds one month.

From the reported data, the assessment also designates effective implementation of the monitoring calendar. In the United Kingdom, monitoring calendar for 2018 was not implemented at two bathing waters.

Table 1: Bathing waters in 2018 according to implementation of the monitoring calendar

	Count	Share of total [%]
Monitoring calendar implemented A bathing water satisfies monitoring calendar conditions listed above.	642	99.70%
Monitoring calendar not implemented A bathing water does not satisfy monitoring calendar conditions listed above. They may be quality-classified if enough samples are available in the last assessment period.	2	0.30%

In addition to the monitoring calendar, management specifics of the last assessment period of four years are also assessed. The status primarily indicates whether the complete dataset of four seasons is available, but also points out the reasons as to why the bathing waters do not have the complete last assessment period dataset. The latter may indicate developing conditions at the site – most importantly, whether the bathing water has been newly identified within the period, or any changes have occurred that are likely to affect the classification of the bathing water.

Table 2: Management specifics in the last assessment period of 2015–2018

	Count	Share of total [%]
Continuously monitored A bathing water has been monitored in each bathing season in the last assessment period.	622	96.60%
Newly identified A bathing water was identified for the first time within the last assessment period. Such status is assigned until the complete four-year dataset is available, i.e. for three years after the first reporting.	17	2.60%
Quality changes A bathing water was subject to changes described in BWD Art. 4.4 within the last assessment period. Such status is assigned until the complete four-year dataset of samples taken after changes took effect is available.	1	0.20%
Monitoring gap A bathing water was not monitored for at least one season in the last assessment period. No quality	4	0.60%

classification is made if no samples are reported for the most recent season.

3. Bathing water quality

3.1 Coastal bathing waters

Coastal bathing waters are situated on the sea or transitional water coastline, with respective parameter thresholds defined in Annex I of the Directive. They are subject to more strict thresholds than the inland bathing waters. Quality trend in the United Kingdom for the period 1990–2018 if historical data are available is shown in Figure 1. Count of bathing waters by quality class for the last assessment period 2015–2018 is given in Annex I.

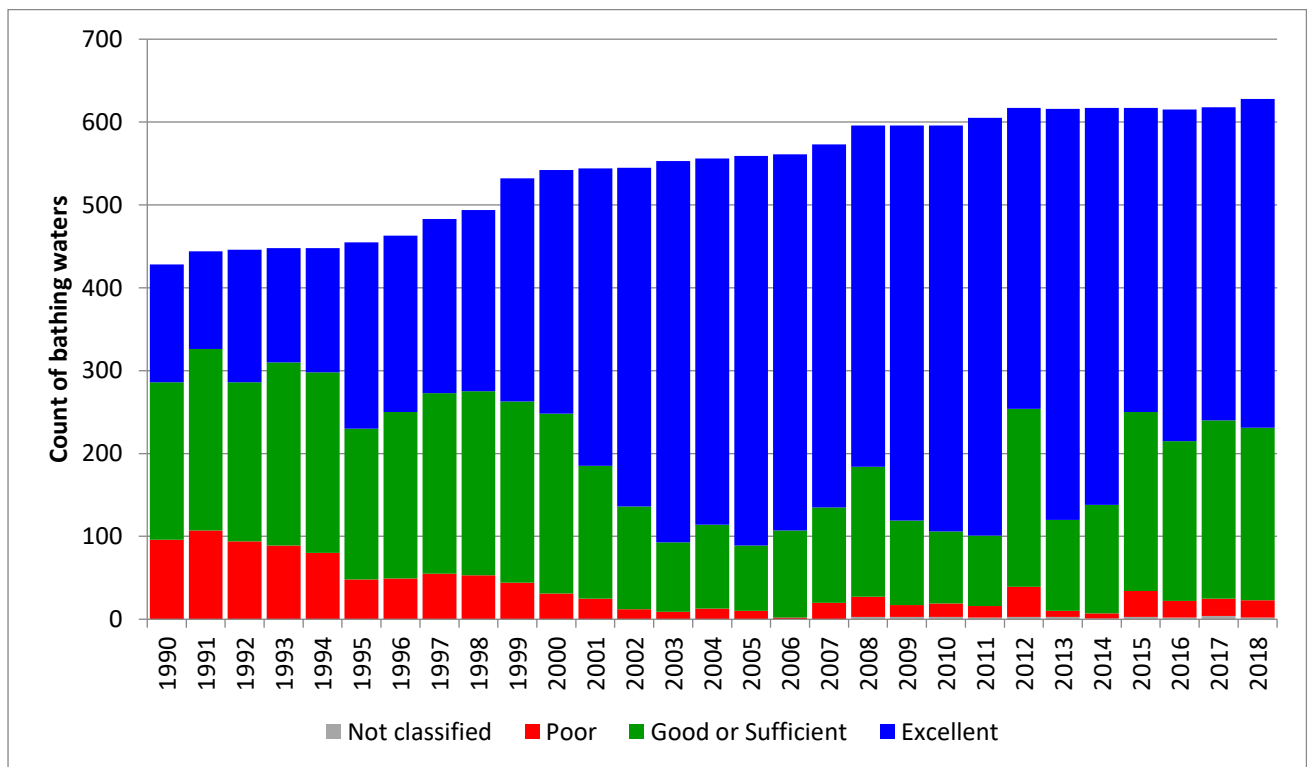


Figure 1: Trend of coastal bathing water quality in the United Kingdom. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes “good” and “sufficient” are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.

3.2 Inland bathing waters

Inland bathing waters are situated at rivers and lakes, featuring fresh water and with respective parameter thresholds defined in Annex I of the Directive. Quality trend in the United Kingdom for the period 1990–2018 if historical data are available is shown in Figure 2. Count of bathing waters by quality class for the last assessment period 2015–2018 is given in Annex I.

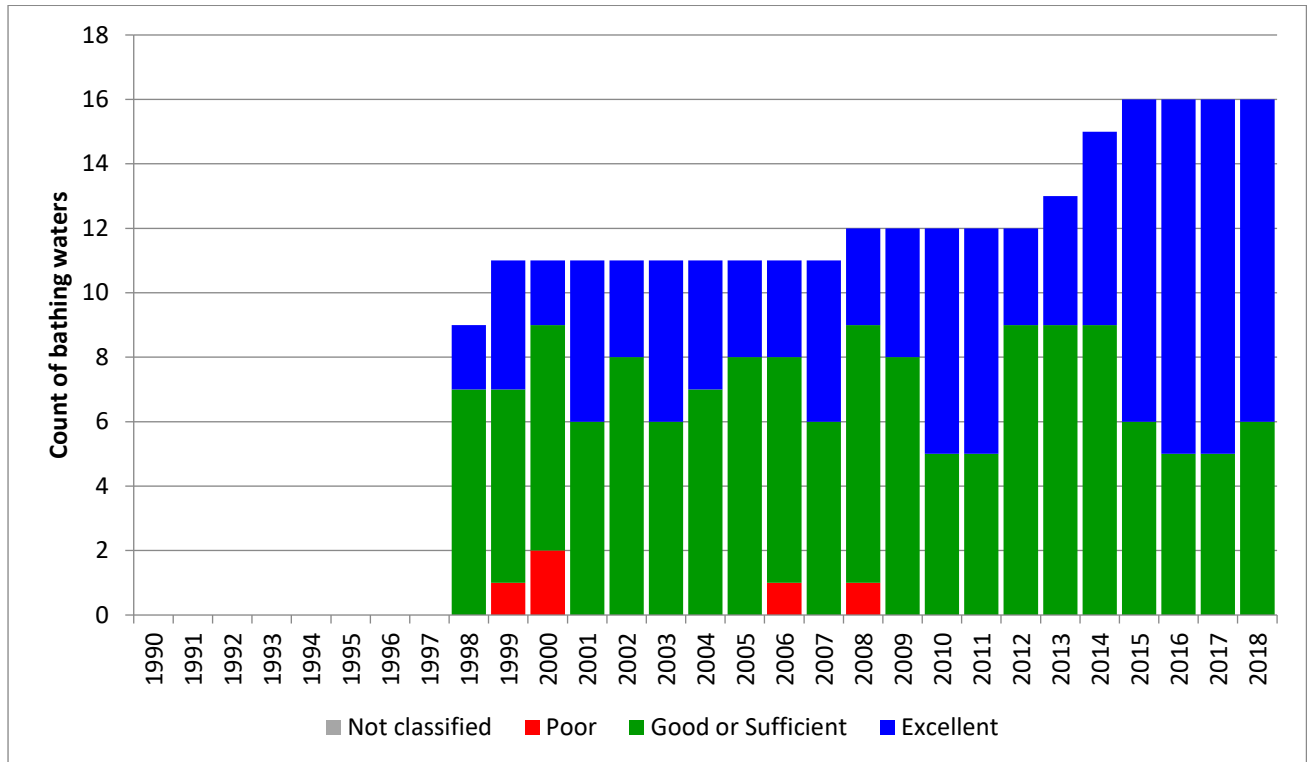


Figure 2: Trend of inland bathing water quality in the United Kingdom. Notes: Each column represents an absolute count of bathing waters in the season. Quality classes “good” and “sufficient” are merged for comparability with classification of the preceding Bathing Water Directive 76/160/EEC.

4. Bathing water management in the United Kingdom

In addition to monitoring data, reporting countries also provide information on bathing water management in the country. The information is used to exchange good practices, discuss issues on the European level, and understand the specifics of implementation of the Directive.

Information to the public

Bathing water quality information in the UK can be accessed through a wide range of sources, including online. Up-to-date results of samples taken in 2018 were posted on the websites of:

- The Environment Agency for bathing waters in England
<http://environment.data.gov.uk/bwq/explorer/index.html>;
- Natural Resources Wales
<http://environment.data.gov.uk/wales/bathing-waters/profiles/>
- the Scottish Environment Protection Agency
http://www.sepa.org.uk/water/bathing_waters.aspx;
- The Northern Ireland Direct website at: <http://www.nidirect.gov.uk/bathing-water-quality> and on the Department of Agriculture, Environment and Rural Affairs website at: <https://www.daera-ni.gov.uk/topics/water/bathing-water-quality>

Monitoring information is also available to the public on registers held by the competent authorities and detailed summaries are published annually.

Daily pollution risk forecasts were available online for 155 bathing waters in England and 12 in Wales. Local authorities provide warning signs at beaches on days when reduced water quality is forecast. At 35 bathing waters in England, electronic signs display the day's pollution risk forecast.

In England, the Environment Agency uses a web tool called a widget to make it possible to share the latest bathing water quality results via other organisations' websites, including local authorities, tourist attractions and businesses. The widget designer is a simple tool that helps website managers and builders to configure a widget and embed it into their own site, allowing them to display the latest data from one or more bathing waters in their area. It can be seen on the Environment Agency's website:

<http://environment.data.gov.uk/bwq/widget/design>.

In Wales, information on water quality for all 104 designated bathing waters is available at:

<http://environment.data.gov.uk/wales/bathing-waters/profiles/>.

In Scotland, electronic signage providing daily real-time bathing water quality predictions is available at 29 bathing waters, along with updates on the web, a smartphone mobile website and a dedicated beachline phone number.

In Northern Ireland, bathing water results and information on identified bathing waters are available on the NI Direct website at: <http://www.nidirect.gov.uk/bathing-water-quality> and on the Department of Agriculture, Environment and Rural Affairs website at: <https://www.daera-ni.gov.uk/topics/water/bathing-water-quality>.

In Gibraltar, bathing water results are uploaded on to the Environmental Agency website for the public to view: <http://environmental-agency.gi/index.php/bathing-water/>.

Relevant information can also be accessed via the Environmental Agency app (Gibenviro) for mobile phones and tablets. The Environmental Agency also disseminates information regarding bathing water quality to the public via press releases.

Treatment of wastewater

The UK water industry continues to implement solutions to meet the requirements of the Bathing Water Directive. Plans for the 2015-2020 period include considerable investment to improve and protect over 50 waters.

In England and Wales, for the year April 2017 to March 2018, all ten water and sewerage undertakers again reported 100% delivery of planned schemes in the National Environment Programme set by the Environment Agency in England and Natural Resources Wales in Wales. Bathing water quality has improved significantly over the past three decades as a direct result of investment by water companies and work by other stakeholders. Over this period, over half of the Combined Sewer Overflows (CSOs) in England have been upgraded by water companies to meet environmental needs, including the improvement of bathing waters. The majority of bathing waters are of high quality and further investment is planned to maintain compliance with the legal requirements and, at some locations, to go beyond these and attain Good or Excellent status.

Schemes completed in the year ending 31 March 2018 included the provision of additional storage to reduce the frequency of storm discharges at CSOs and pumping stations, the provision of UV disinfection to the treatment processes at wastewater treatment works and the installation of event duration monitors and alarm telemetry in the sewer networks. In addition, either field investigations or coastal and network modelling exercises were carried out at locations where bathing waters either are at risk of being classified as Poor or of deteriorating to Poor if no action is taken, or where bathing waters are judged to have a greater than 20% risk of deteriorating from the position in 2011.

In Northern Ireland, Northern Ireland Water has worked with the Northern Ireland Environment Agency and Department of Agriculture, Environment and Rural Affairs to identify priorities for investment as part of the 2015-2021 PC15 capital business planning. There are currently two main live capital works for bathing water quality improvements being undertaken in Bangor and Millisle. These projects will be completed in 2018/2019. Ballycastle has recently seen the completion of major improvements to the waste water treatment works, which now provides secondary treatment and increased storage. Event and duration monitors are to be installed at all CSOs within 2km of identified bathing waters and shellfish water Protected Areas in the PC15 period. Northern Ireland Water has ongoing involvement in the UK-led 21st Century Drainage Programme Work packages.

In Scotland, throughout 2018 work has continued with the aim of reducing the number of Poor bathing waters. During the 2018 bathing season the Scottish Environment Protection Agency (SEPA) carried out an intensive programme of monitoring with the aim of identifying the remaining sources of pollution. This has

involved sampling at multiple locations throughout relevant urban areas close to affected beaches; monitoring upstream in the associated catchments; and carrying out DNA testing of samples to identify whether the main source is human or livestock, and whether there are traces of DNA from dogs and gulls.

During 2018 the Scottish Government funded research to look at two locations impacted by multiple septic tank discharges, with the aim of exploring the possibility of a more strategic approach to the management of rural wastewater, in conjunction with Water Industry colleagues.

The investment programme 'Quality and Standards 4' runs from 2015-2027 and takes account of infrastructure investment requirements to ensure compliance with bathing water standards in Scotland. Further details of the requirements set by Ministers for Scottish Water to develop in the period 2015-27 are provided on the Scottish Government's website at:

<http://www.scotland.gov.uk/Topics/Business-Industry/waterindustryscot/improvingservices/currentimprovement>

Treatment of sources of diffuse pollution from agriculture

Tackling diffuse water pollution from agriculture is a major part of UK water quality policy and a key element of achieving the objectives of the Bathing Water Directive and Water Framework Directive. The Government has set out its commitments in the 25 Year Plan for the Environment and UK authorities are working with farmers and others to develop measures to reduce diffuse water pollution from agricultural and urban sources, and to provide information and advice on how to achieve this.

In England, authorities are working with farmers to develop mechanisms to ensure that all farmers adopt basic measures and to secure uptake of additional measures through advice and incentive mechanisms. Evidence of diffuse pollution from agriculture collected by the Environment Agency is being used to target measures to water bodies where they will deliver the greatest benefit.

In April 2018 some new statutory rules for all farmers in England to tackle diffuse water pollution from agriculture came into force. The new "farming rules for water" require farmers to test their soils and apply fertilisers according to soil and crop needs, thereby avoiding excess nutrients which can pollute water. Other rules set minimum distances from water for storing or spreading fertilisers. Farmers must consider soil and weather conditions to decide when to apply fertilisers, avoiding water pollution. There are also rules to avoid soil erosion and run-off from livestock poaching (soil compaction) and from livestock too close to water courses. The rules will be implemented by the Environment Agency, providing farmers with all the information they need to meet the standard. Enforcement will be proportionate and will include civil sanctions (such as fixed penalty notices) and criminal prosecution.

Catchment Sensitive Farming (CSF) is an important delivery mechanism in England, seeking to reduce agricultural pollution using a network of Catchment Officers who deliver advice and grants to farmers. Since 2015 the CSF capital grant scheme has been integrated into the Countryside Stewardship agri-environment scheme. Funding is targeted towards high priority areas for water where multiple Water Framework Directive objectives (including those for Protected Areas like bathing waters) are not being met due to agriculture. The grants provide financial support for farmers investing in farm infrastructure items such as watercourse fencing that restricts livestock, and therefore faecal pollution, from watercourses. The farm

advice helps ensure the right measures are sited in the right place and then managed appropriately. 2016 marked the beginning of a new phase of delivery to address faecal pollution, as CSF is now consistently focused on the same water quality priority areas as Countryside Stewardship, thus helping to ensure effective use of the scheme for bathing water quality. During 2018, CSF has been working on 23 bathing waters across 15 catchments. CSF Officers have engaged with 1090 farms in these catchments, which (as of October 2018) has secured a total of 1009 Countryside Stewardships. This is an increase of 658 agreements since 2016. CSF Officers have recommended over 6300 measures to reduce diffuse pollution on farms in bathing water catchments. These measures focused on land use, manure and fertiliser management, soil management, pesticide management, livestock management and farm infrastructure.

An additional mechanism in England to help tackle diffuse water pollution is the Catchment Based Approach (CaBa). This approach establishes local partnerships between all those that have an interest in water and the wider environment. These partnerships are able to better identify the pressures, agree priorities and elicit more action to improve the local water environment. There are currently over 100 Catchment Partnerships set up across England's 87 (93 including cross-border) catchments. In line with Defra's policy framework, the vast majority of the partnerships are hosted by third sector organisations. To support these partnerships there is a central National CaBa Support Group which works to enhance the effectiveness and impact of local partnership working (e.g. sharing best practice, mentoring, steering investment in Research and Development).

In England, in order to develop appropriate policy interventions, Defra funds significant research into understanding the relationships between agriculture, diffuse pollution and water quality, and evaluating the cost-effectiveness of mitigation measures. This includes the second phase of the Demonstration Test Catchments (DTC) programme (2015-18), which aims at testing diffuse pollution mitigation measures in combination at a large scale in four English catchments: the Eden (Cumbria); Wensum (Norfolk); Avon (Hampshire), and Tamar (Devon/Cornwall). This research combines a biophysical and socio-economic assessment of the efficacy and appropriateness of mitigation measures to reduce pollution, and is used to support policy development and the design of evaluation programmes. This programme also serves to engage stakeholders in the development of strategies to reduce agricultural pollution and provides a research "platform" to host additional research activities on agricultural and catchment science. Defra-funded research, including DTC, generally integrates Faecal Indicator Organisms (FIOs) when evaluating the efficacy of specific mitigation measures to reduce diffuse water pollution.

Defra has also contributed to a research initiative to develop an integrated model to predict the exposure to, and the health impact assessment of, pathogen risks by FIO in near-shore coastal waters. The outcomes of the project modelling the delivery of FIOs from land to water in headwater catchments can be seen on its website: <http://www.sheffield.ac.uk/c2c>

In Wales, financial support is available to farmers and land managers through the Glastir sustainable land management scheme. Glastir pays for the delivery of specific environmental goods and services aimed at combating climate change, improving water management and maintaining and enhancing biodiversity. It is designed to deliver measurable outcomes at both farm and landscape level in a cost effective way. Since 2017 several schemes have run to support nutrient management practices, mitigate diffuse agricultural pollution to water bodies and enhance the provision of a full range of ecosystem services. The Glastir Entry scheme includes commitments on farmers and land managers to deliver environmental goods for five years.

Glastir Advanced targets financial support at specific locations where action will best deliver a range of objectives including habitats, species, soil and water. Glastir Woodland supports land managers who wish to create new woodland, re-stock woodlands infected by *Phytophthora ramorum* or manage existing, mainly farm, woodlands. It provides beneficial outcomes for a range of woodland types, species, soils and water. In addition, there is the capital works only Glastir Small Grants scheme and a new investment grant, the Farm Business Grant. The Sustainable Production Grant is designed to increase on-farm efficiencies, including the management of natural resources. These are stand-alone schemes which contribute to the delivery of the Welsh Government's ambitions to tackle climate change and improve water management. Under the Farm Business Grant land managers and farming businesses can benefit from a maximum funding of up to £12,000 for capital works, subject to selection, whilst the Sustainable Production Grant has been re-focused to address improved nutrient management and storage to benefit soil, air and water quality.

The UK is continuing its implementation of the Nitrates Directive, which aims to reduce pollution of water by nitrates from agricultural sources. There are separate Action Programmes for England, Wales, Scotland and Northern Ireland. Mandatory measures within the Action Programmes control the use and management of chemical nitrogen fertiliser and organic manures on farms located within the Nitrate Vulnerable Zones (NVZs). Studies have shown that these measures, although specifically designed to tackle nitrate pollution, will also reduce losses of FIOs and phosphate to water. In recent years, nitrate concentrations in English waters have continued their general decline. NVZ designations for the period 2017 to 2020 were announced on 1 December 2016 and took effect from 31 December 2016. NVZs cover approximately 55% of land in England. In Wales the current Regulations came into effect on 1 October 2013 (2013 Regulations) and both these and the current Action Programme for Wales have been reviewed and the Welsh Government will shortly be introducing Regulations across the whole of Wales to tackle agricultural pollution.

The Regulations to be introduced in Wales will, in addition to providing greater water protection across the whole of Wales, be the first step in establishing baseline regulations to underpin future land management schemes. As such, the regulations will be referred to in broad terms, rather than nitrates in particular, and are expected to include further measures over time. The regulations, which are anticipated to apply from 1 January 2020, will replace the 2013 regulations and will continue to be compliant with the requirements of the Nitrates Directive. Alongside the decision to establish a more robust legislative framework to address agricultural pollution and the result of extensive work with stakeholders, the Welsh Government's Farming Connect programme has increased its focus on providing advice and guidance to farmers on the need and measures available to tackle agricultural pollution. Farming Connect events have been held in 28 catchments in which waterbodies fail to achieve "good condition" status under the Water Framework Directive, where other interventions are not already in place. This has led to the establishment of six Agrisgop groups – farmers working in partnership with the aim of addressing pollution issues. Farming Connect agricultural pollution events are mandatory requirements for all farmers applying for Sustainable Production Grant under the Rural Development Programme for Wales. Applications addressing pollution issues are prioritised for Sustainable Production Grant.

A Nitrates Action Programme covering the total territory of Northern Ireland and applicable to all farmers has been operational since 1 January 2007. It is reviewed every four years and most recently during 2014. A revised Action Programme for the period 2015-18 has been in place since 1 January 2015. A review of the 2014-18 action programme is currently underway. The outcome of the review will help guide the production of new proposals to be taken forward in the next action plan starting in 2019. In addition, in Northern

Ireland, in support of the Nitrates Action Programme, the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2014 limit the use of chemical phosphorus fertiliser to crop requirement.

Agreements under the Northern Ireland Countryside Management Scheme will end on 31 December 2019. The Environmental Farming Scheme (EFS) is Northern Ireland's new Agri-Environment Scheme. The first tranche opened in February 2017 and closed in March 2017 with over 1300 applications. The second tranche opened in August 2018 and closed in September 2018 with 1639 applications. The EFS has been designed to address specific environmental needs, primarily relating to biodiversity and water quality. The water quality improvement measures will be targeted to areas most at risk from agricultural diffuse pollution.

Annual assessments are made of Northern Ireland's bathing water quality to determine those at risk of failing Bathing Water Directive standards. These catchments are subjected to detailed catchment investigations to identify and rectify actual pollution sources in an effort to continue to drive improvements in water quality and ensure no deterioration.

Scotland's programme of rural diffuse pollution priority catchment work started in March 2010 in 14 priority catchments identified as being at risk from diffuse pollution to help deliver the objectives outlined in the River Basin Management Plans for the Scotland and Solway Tweed river basin districts. SEPA is continuing to work with land managers in these catchments and in the second River Basin Management Plan (2016-21) has extended this to include a further 43 priority catchments. SEPA staff have carried out one-to-one visits with land managers to discuss diffuse pollution issues and, with key stakeholders, organised events and workshops to raise awareness and discuss actions that could be taken to reduce diffuse pollution and to protect and improve water quality in catchments impacting on bathing water quality. Scotland has also launched a dedicated Farming and Water Scotland website to provide advice to land managers on diffuse pollution issues and their legal responsibilities. A "Farming and Water Scotland" roadshow attended agricultural events across Scotland in 2018 and this will continue into 2019. The Water Environment (Controlled Activities) (Scotland) Regulations continue to play a key role in mitigating diffuse pollution, with compliance with the general binding rules showing continual improvement. Revisions to these Regulations, to further protect the water environment, came into force early in 2018.

The Scotland Rural Development Programme 2014-2020 offers funding to land managers towards the cost of measures to reduce diffuse pollution. The Programme now includes measures to mitigate run-off from farm steadings, which has the potential to have a considerable impact on the water environment.

Treatment of non-agricultural sources of diffuse pollution

In England, planning authorities are required to make sure that sustainable drainage systems (SuDS) are put in place when considering applications for new major development, unless it is demonstrated that they are clearly inappropriate, and that there are clear arrangements in place for ongoing maintenance of the SuDS. This is in addition to existing requirements that SuDS should be given priority in new developments in flood risk areas. A revised national planning policy was published on 24 July 2018 to further encourage SuDS. In addition, the water industry regulator is expected to challenge sewerage undertakers to improve planning and investment to meet the wastewater needs of current and future customers, while protecting the environment. This could include promoting, adopting or maintaining SuDS.

In Wales, on 1 May 2018 the Welsh Government commenced Schedule 3 to the Flood and Water Management Act 2010, to come into force on 7 January 2019. Schedule 3 makes the provision of SuDS which comply with the published Welsh Ministers' Standards mandatory for new developments with a construction area of over 100m². The Standards provide a framework for approval of these schemes and the adoption of SuDS serving two or more premises by SuDS Approving Bodies (or SABs) within Welsh local authorities.

In Scotland it is required by legislation that, in most circumstances, new developments must include SuDS to control surface water drainage.

In 2018 the Scottish Government funded targeted projects:

- on-the-ground studies to identify the exact location of pollution sources in towns and cities draining to certain Poor bathing waters;
- a campaign at Portobello and Ayr in partnership with Keep Scotland Beautiful to raise public awareness of the impact that dog and gull faeces can have on bathing water quality, with the aim of reducing pollution from such sources.

Northern Ireland Environment Agency recommends that SuDS are incorporated, where appropriate, into the drainage design of all new developments for the environmental management of rainfall and surface water drainage.

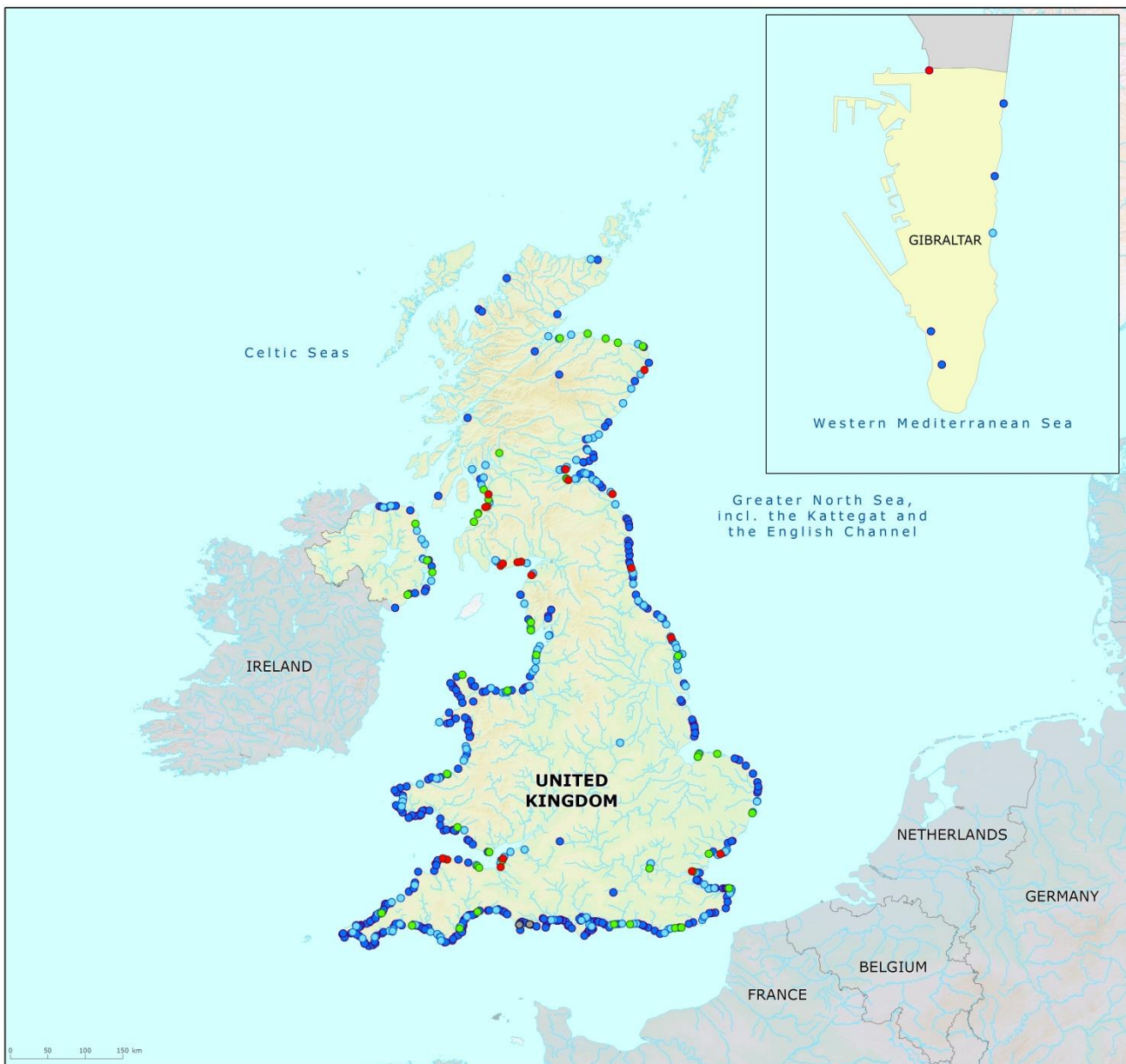
Annex I Bathing water quality in the United Kingdom in 2015–2018

Table 3: Bathing water quality by water category and season

		Total count of bathing waters	Excellent		Good		Sufficient		Poor		Not classified	
			Count	%	Count	%	Count	%	Count	%	Count	%
Coastal	2015	617	367	59.5	169	27.4	47	7.6	31	5.0	3	0.5
	2016	615	400	65.0	153	24.9	40	6.5	20	3.3	2	0.3
	2017	618	378	61.2	164	26.5	51	8.3	21	3.4	4	0.6
	2018	628	397	63.2	165	26.3	43	6.8	21	3.3	2	0.3
Inland	2015	16	10	62.5	5	31.3	1	6.3	0	0.0	0	0.0
	2016	16	11	68.8	4	25.0	1	6.3	0	0.0	0	0.0
	2017	16	11	68.8	3	18.8	2	12.5	0	0.0	0	0.0
	2018	16	10	62.5	4	25.0	2	12.5	0	0.0	0	0.0
Total	2015	633	377	59.6	174	27.5	48	7.6	31	4.9	3	0.5
	2016	631	411	65.1	157	24.9	41	6.5	20	3.2	2	0.3
	2017	634	389	61.4	167	26.3	53	8.4	21	3.3	4	0.6
	2018	644	407	63.2	169	26.2	45	7.0	21	3.3	2	0.3

Annex II Bathing water quality map

Map 1: Bathing waters reported during the 2018 bathing season in the United Kingdom



Bathing water

- Excellent water quality
- Good water quality
- Sufficient water quality
- Poor water quality
- Quality classification not possible
- 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: U.K. authorities; Digital Elevation Model over Europe (EU-DEM): EEA.