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European bathing water quality in 2011

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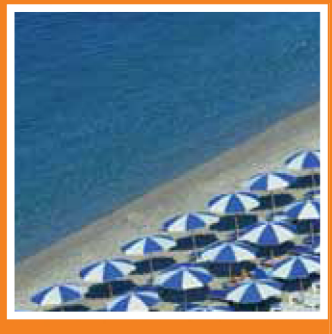

European Environment Agency

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Contents

Foreword

This year, one particular bathing site will be in the spotlight more than most. The Serpentine lake in London will be the site of several Olympic events. Millions of television viewers may be considering a common question that emerges whenever they consider swimming at a beach, river or lake: 'Is it clean?'

Fortunately for the athletes, the water in the Serpentine has complied with mandatory values for the last five years.

This year is the European Water Year and we are giving top priority to water issues. There are many challenges, both old and new, for Europe's waters. Since the adoption of the Water Framework Directive in 2000, EU water policy has made another step change by taking an integrated approach to river basin management with an ambitious goal for all EU waters to achieve good status by 2015. To respond to the current water challenges, the European Commission intends to adopt a Blueprint to Safeguard Europe's Water Resources by the end of 2012.

Europeans care about water quality and knowing that they have clean and safe water to swim or play in is an important factor in their choice of a holiday or weekend destination. For the tourism industry, clean and safe water is also a major factor in attracting visitors to an area. To allow Europeans to make an informed choice, the European Environment Agency (EEA) and the European Commission publish an annual report on the quality of more than 22 000 bathing sites. In 2012 the report includes sites in all 27 EU Member States and three other countries. This report can help all water users find high quality bathing water across the region.

This year's report reveals that 92.1 % of bathing waters in the EU met the minimum water quality standards set by the bathing water directives. The number of bathing waters with excellent quality or complying with the more stringent guide values increased by 3.5 percentage points compared to 2010, reaching 77.1 %. However, the share of non-compliant bathing waters also increased by 0.1 % from 2010, with the total now amounting to 1.8 %. While these results for the quality of bathing waters are good, they are not enough to meet our expectations. More efforts are needed to achieve the good environmental status required by the Water Framework Directive.

To get more detailed information about water quality at their local bathing site, European citizens can find out more by using various online resources such as Eye on Earth. The Eye on Earth global public information service (see Chapter 6) brings together vast amounts of data about the environment in a powerful, visual format. It includes an application called WaterWatch, which allows users to zoom in on their local beach, see previous records and submit their own rating of water quality. These resources are continuously improved and built upon, and we urge anyone interested to take a look and make use of them.

This report and the various online resources will give you a wealth of information to prepare for the holiday season. However, we hope this information has a longer lifespan than just the summer months, effectively encouraging all of us to get more actively involved in protecting the environment and improving Europe's bathing areas.

We wish you a good summer!

Janez Potočnik
European Commissioner for the Environment

Jacqueline McGlade
Executive Director, European Environment Agency

Executive summary

The European Union and its Member States have been working for years to improve water quality. Today Europe's bathing waters are much cleaner than thirty years ago when large quantities of untreated or partially treated municipal and industrial wastewater were discharged into water.

Each year millions of Europeans spend their weekends at their local beach or visit Europe's hugely diverse and beautiful beaches and bathing areas. Naturally, they have a keen interest in the quality of the bathing waters. The European Environment Agency (EEA) and the European Commission are therefore pleased to present this year's bathing water report, which will help Europeans make informed choices about the bathing sites they visit.

This report provides a comprehensive synopsis of the quality of bathing waters in the Member States of the European Union in the 2011 bathing season. It thereby gives an indication of the areas where the quality of bathing is expected to be good during 2012. The report also shows the evolution of bathing water quality from 1990 to 2011.

Of the more than 21 000 bathing areas monitored throughout the European Union in 2011, two thirds were in coastal waters and the rest in rivers and lakes. The largest numbers of coastal bathing waters can be found in Italy, Greece, France and Spain, while Germany and France have the highest numbers of inland bathing waters.

During recent years, including the 2011 bathing season, Member States have adjusted their monitoring programmes to meet the requirements of the EU's new bathing water directive (Directive 2006/7/EC). At some sites sampling does not yet fully satisfy the new frequency criteria. This fact does not necessarily indicate unsatisfactory bathing water quality, however, so for 2011 results reported under less strict rules ([1]) are given, in accordance with the practice for 2010.

Overall in 2011, 92.1 % of bathing waters in the EU met the minimum water quality standards set by the bathing water directives. Bathing water quality increased at 0.6 % of sites in 2011 compared to 2010. The proportion of bathing waters with excellent quality (or complying with the more stringent guide values) increased by 3.5 percentage points compared to 2010, reaching 77.1 %. The share of non-compliant bathing waters was 1.8 %, which was a 0.1 percentage point increase from 2010. In 2011, 207 bathing waters were banned or closed (1 %), which was 57 more than in the 2010 bathing season.

Some 93.1 % of coastal bathing waters in the EU achieved at least sufficient quality (or complied with the mandatory values). This was an increase of 1.0 percentage points compared to 2010. Some 80.1 % of coastal bathing waters complied with the more stringent guide values in the 2011 bathing season, a 0.6 percentage point increase from 2010.

Photo: © Peter Kristensen

([1]) Normally, the maximum interval between sampling is one month. Under the less strict rules, however, the maximum interval is 41 days. If this frequency is not achieved then a bathing water was classified as insufficiently sampled.

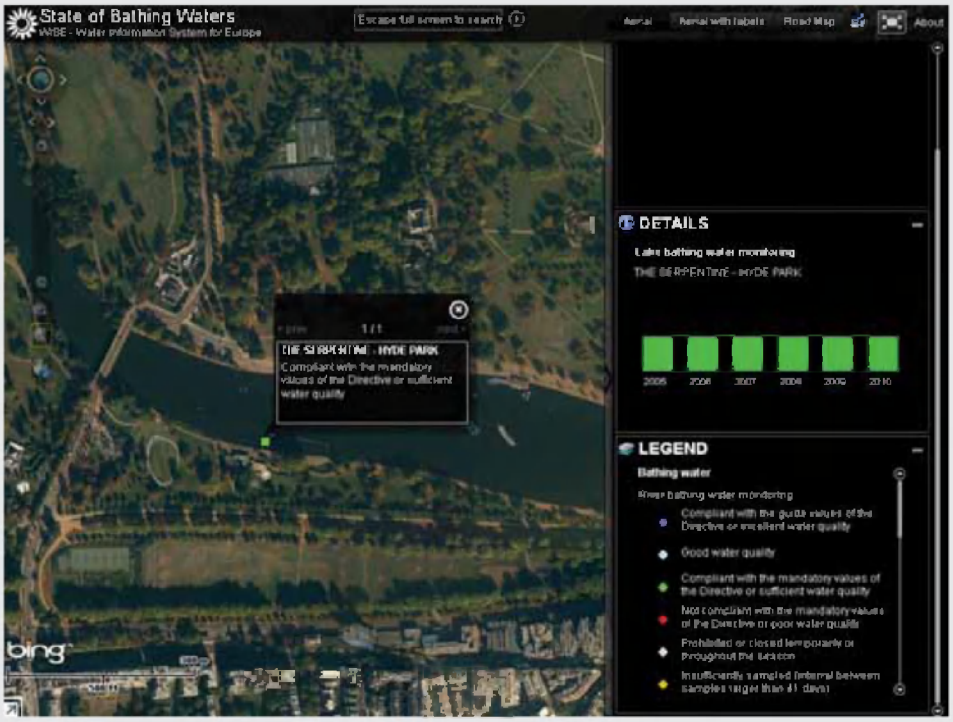
In 2011, 89.9 % of inland bathing waters in the European Union were of sufficient quality (or complied with the mandatory values) during the bathing season. This was a 0.3 percentage point decrease from 2010, but a 0.5 percentage point increase from 2009. The number of inland bathing waters with excellent quality (or complying with the more stringent guide values) increased by 9.9 percentage points compared to 2010, reaching 70.4 %.

The overall quality of bathing waters in the EU has improved markedly since 1990. The number of coastal bathing waters not complying with the bathing water directives' provisions decreased from 565 (9.2 %) in 1990 to 173 (1.2 %) in 2010 and 212 (1.5 %) in 2011. The number of inland bathing areas not complying with mandatory values decreased from 11.9 % in 1990 to 2.4 % in 2011, which is the lowest percentage to date.

Box ES.1 Bathing water used for the 2012 Olympics

The Serpentine is an 11 ha recreational lake in Hyde Park, London, England, created in 1730. It is one of three bathing water lakes in London. The Serpentine will be used as the venue for the open water marathon (10 km) swim and the swimming leg of the triathlon at the London 2012 Olympics.

The bathing water quality of the Serpentine lake can be viewed by using the web tools provided by EEA (see Chapter 6).



For the last five years the bathing water quality of the Serpentine has been classified as complying with the bathing water directive's mandatory value.

Further information can be found at the England and Wales Environment Agency's bathing water profile for the Serpentine lake (http://www.environment-agency.gov.uk/static/documents/bwprofiles/BW_11940_The_Serpentine_Hyde_Park.pdf).

In 11 countries — Cyprus, Malta, Croatia, Greece, Germany, Romania, Portugal, Austria, Ireland, United Kingdom and Italy — more than 80 % of bathing waters achieved excellent (or guide values) bathing water quality. In Malta, Romania, Croatia and Slovenia all bathing waters achieved good (mandatory values) quality. In Cyprus, Greece, Ireland, Austria, Poland, Montenegro, United Kingdom, Slovakia, Bulgaria, Estonia, Portugal and Germany, more than 95 % of sites complied with the mandatory value.

As reported in Chapter 6 of this report, interested citizens now have access to more bathing water information than ever. In addition to annual bathing water reports like this one, online tools allow users to access data for a selected country or region and make comparisons with previous years. The data can also be visualised in geospatial mapping programs such as Google Earth and Bing Maps. This information allows the public to get more actively involved in protecting the environment and improving Europe's bathing areas.

Photo: Serpentine lake, London © Lidija Globevnik

1 Europeans demand safe bathing waters

Bathing water quality is a high priority for Europeans. Knowing that we will be able to enjoy clean and safe waters for swimming, playing or recreation is important in our choice of visits. For the tourism industry, clean and safe water is also a major factor in attracting visitors from all over the world to an area.

To make an informed choice of beach, the European Union (EU) publishes an annual report on the quality of coastal and inland bathing areas, as reported by EU Member States and other European countries. Since 2009 the European Environment Agency (EEA) and its European Topic Centre on Inland, Coastal and Marine Waters have been preparing the report in cooperation with the European Commission's Directorate-General for the Environment.

This report provides a comprehensive synopsis of the quality of bathing waters in the Member States of the European Union and three other countries in the 2011 bathing season. It thereby gives an indication of the areas where the quality of bathing is expected to be good during 2012. It also shows the evolution of bathing water quality from 1990 to 2011.

The first European bathing water legislation, the 'old bathing water directive' ([2]) was adopted in 1975 and came into force in 1976. Its main objectives are to safeguard public health and protect the aquatic environment in coastal and inland areas from pollution. Bathing waters covered by the old bathing water directive can be coastal waters or inland waters (rivers, natural lakes, reservoirs and ponds) in which bathing is explicitly permitted by the competent authorities of each Member State, or not prohibited and traditionally practiced by a large number of bathers. Swimming pools and waters for therapeutic purposes are not covered. The period during which bathers can be expected in bathing areas depends largely on local bathing rules and weather conditions. A bathing season can also vary within a Member State. In the European Union it usually runs from the end of May until the end of September.

New European legislation on bathing waters was adopted in 2006 ([3]). The 'new bathing water directive' updates the measures of the 1975 legislation and simplifies its management and surveillance methods. It also provides for a more proactive approach to informing the public on water quality and creates four quality categories for bathing waters: 'poor', 'sufficient', 'good' and 'excellent'. The classification of bathing water quality is determined on the basis of a four-year (or three-year) trend instead of a single year's result as for the old directive. Therefore, the procedure for assessing the quality of bathing waters under the new bathing water directive gives more reliable and realistic results than the assessment under its predecessor.

The classification under the new bathing water directive is also less susceptible to distortion due to bad weather or one-off incidents. Heavy rain or similar exceptional situations may cause pollution problems for a few days. In such situations authorities have to introduce immediate measures to lower the health risk to bathers. They are allowed, however, to exclude such events from their overall assessment of bathing water quality, as presented in this report.

([2]) Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water.
([3]) Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC.

The new bathing water directive is based on scientific knowledge about protecting human health and environmental management experience. It lays down provisions for more sophisticated monitoring, assessment and classification of bathing water quality. It also provides for better and earlier public information about bathing water quality and public participation. It requires bathing water profiles to be drawn up describing bathing waters, and potential impacts and threats to water quality. These serve both as information for citizens and as a management tool for the authorities responsible, and enable grouping of bathing waters.

Photo: Serpentine lake, London © Lidija Globevnik

2 EU bathing water legislation and its implementation in 2011

2.1 Implementation in 2011

Member States have until December 2014 to achieve full implementation of the new bathing water directive. As such Member States could still choose to report either under the old or new bathing water directives until the 2011 bathing season; from the 2012 bathing season reporting under the new directive will become obligatory.

For the 2011 season, bathing water quality has been assessed under the new bathing water directive in 16 European countries (Table 2.1). This is 13 more than for 2010 bathing season. Only three countries — Czech Republic, Romania and the United Kingdom — are still assessed under the old bathing water directive. Eleven countries are assessed under the transition period rules.

Since 2009, Croatia and Switzerland have submitted reports on the quality of their bathing waters. For 2010 Montenegro also submitted a report for the first time. The bathing water quality assessment for 2011 includes all three countries. All have reported under the new bathing water directive.

Table 2.1 Number of European countries assessed under the old directive, transitional and new directive rules in the period 2009–2011

	2009	2010	2011
Under the old bathing water directive	13	6	3
Transition period	14	21	11
Under the new bathing water directive	2	3	16
Total	**29**	**30**	**30**

2.1.1 *Reporting requirements under EU bathing water legislation*

Local authorities monitor water quality in Europe, including sampling and analysing bathing water. Frequently during the bathing season they take samples from more than 22 000 coastal and inland bathing waters. The laboratories analysing the bathing water samples count the number of certain types of bacteria, which may indicate the presence of pollution, mainly from sewage or livestock waste. These samples are analysed against the values established by the bathing water directives. The results of the analysis are used to provide warnings in cases of poor quality and are often posted on local or national websites. The local results are then sent to the national authorities.

Member States are obliged to provide the results of their samples to the European Commission before 31 December of the same year. Before the start of the bathing water season the following year, the Commission, together with the European Environment Agency, publishes an EU-wide report covering all 27 Member States, available in print and online.

2.1.2 *Assessment of bathing water quality under Directive 76/160/EEC*

The old bathing water directive sets out a number of physical, chemical and microbiological parameters against which the quality of bathing water is tested. Member States must comply with the mandatory values but may adopt stricter standards and non-binding guidance values.

Based on the results of sampling for five parameters (total coliforms, faecal coliforms, mineral oils, surface-active substances and phenols), bathing waters are classified into the following classes:

CI: bathing waters that complied with the **mandatory values**;

CG: bathing waters that complied with the **guide values**;

NC: bathing waters that **did not** comply with the **mandatory values**;

NF: bathing waters that were **not sufficiently sampled** (frequency criteria not satisfied);

NS: bathing waters that were **not sampled** due to external causes;

B: bathing waters that were **closed or banned**.

2.1.3 Assessment under Directive 2006/7/EC

The new bathing water directive from 2006 (Directive 2006/7/EC) requires that EU member states comply with even stricter requirements and implement effective management of bathing water, public participation and better information dissemination.

In accordance with the new directive, by 2012 at the latest, all EU Member States will begin to monitor and report the measured values of concentrations of two microbiological parameters — intestinal enterococci and *Escherichia coli* — in all bathing waters. Assessment of bathing waters is based on the concentration of these two parameters in the last four years. When less than four years of data are available, the assessment is done under the transition period rules.

The frequency of sampling is set out in Annex IV of the Directive. Including a sample to be taken shortly before the start of the bathing season, the minimum number of samples taken per bathing season is four. However, only three samples are sufficient when the bathing season does not exceed eight weeks or the region is subject to special geographical constraints. Sampling dates are to be distributed throughout the bathing season, with the interval between sampling dates never exceeding one month. In some cases the required changes of the new bathing water directive have yet to be implemented, resulting in a late start date to sampling at some sites and/or insufficiently frequent sampling.

Strictly speaking, the first sample should be taken not later than 10 days after the start of the bathing season and the interval between sampling should not exceed one month. Since a late start of monitoring and/or low frequency do not necessarily indicate unsatisfactory bathing water quality, however, for 2011 less strict rules have been deemed acceptable. According to the 'less strict' approach, the maximum interval between two samples is 41 days.

Coastal and inland bathing waters are classified as 'excellent', 'good', 'sufficient' and 'poor' quality. Some bathing waters cannot be classified according to their quality but are instead classified as 'closed', 'new' (classification not yet possible), 'changes' (classification not yet possible after changes) or 'insufficiently sampled'.

2.1.4 Assessment during the transition period — reporting under Directive 2006/7/EC and assessment according to the limit values of Directive 76/160/EEC

Assessing bathing water quality under Directive 2006/7/EC requires a data set of three or four consecutive years. While those data are being compiled, the transition period rules are applied. This means that the classification of bathing waters is defined on the basis of concentrations of intestinal enterococci and *Escherichia coli* reported under Directive 2006/7/EC but the limit values for the classification are those given in Directive 76/160/EEC.

As shown in Table 2.2, the standards used for assessing the intestinal enterococci and *Escherichia coli* parameters during the transition period match those used for the faecal streptococci and faecal coliforms parameters under the old directive. In addition, during the transition period compliance to the guide or mandatory values is determined using a single year's data. The bathing waters are classified into the following classes: CI, CG, NC, NF, NS or B.

Table 2.2 Parameters used to assess bathing water quality during the transition period

Parameter in Directive 2006/7/EC	Corresponding parameter in Directive 76/160/EEC	Guide values	Mandatory values
Intestinal enterococci	Faecal streptococci	100 (cfu/100 ml)	([a])
Escherichia coli	Faecal coliforms	100 (cfu/100 ml)	2000 (cfu/100 ml)

Note: ([a]) There is no mandatory standard for the parameter 'faecal streptococci' under Directive 76/160/EEC. This means that only the parameter 'faecal coliforms' is taken into account for evaluating the compliance of bathing water with mandatory values. Evaluation of compliance with guide standards is based on both parameters.

2.2 Trends in urban wastewater treatment

During the last century population growth and increased wastewater production, coupled with a greater percentage of the population being connected to sewerage systems, initially resulted in increases in the discharge of pollutants into surface water in most European countries. Over the last 20 to 35 years, however, the biological treatment (secondary treatment) of wastewater has increased, and organic discharges have consequently decreased throughout Europe. During the last 20 years tertiary (advanced/more stringent) treatment with nutrient removal (phosphorus and nitrogen) has been introduced at many wastewater treatment plants resulting in markedly lower nutrient discharge to receiving waters.

The Urban Wastewater Treatment Directive (UWWTD) ([4]) aims to protect the environment from the adverse effects of discharges of urban wastewater from settlement areas and biodegradable industrial wastewater from the agro-food sector, by requiring Member States to ensure that such water is collected and adequately treated. Full implementation of the directive is also a prerequisite for meeting the environmental objectives set out in the EU bathing water directives, the Water Framework Directive ([5]) and the Marine Strategy Framework Directive ([6]).

The UWWTD requires wastewater from all agglomerations of more than 2 000 people to be collected and treated. Its implementation has led to an increasing proportion of the EU's population being connected to a municipal treatment works via a sewer network (Figure 2.1). Connection rates in northern Europe now exceed 80 % of the population while in central Europe the figure is above 95 %. Elsewhere in Europe connection rates are lower, although in the case of the newer Member States this is explained by the later compliance dates agreed in the accession treaties.

The majority of wastewater plants in northern and central Europe now apply tertiary treatment. Elsewhere in the EU, particularly in the south-east, the proportion of primary and secondary treatment is higher (Figure 2.1). While considerable progress has been made in implementing the UWWTD, full compliance is yet to be achieved, even bearing in mind the longer compliance timelines for the newer Member States. Shortcomings include a lack of more stringent tertiary treatment in some sensitive areas and inadequate treatment levels in wastewater treatment plants in some larger cities.

More information on the implementation of the Urban Wastewater Directive is available in the 6th Commission report on the implementation of the Urban Wastewater Treatment Directive ([7]).

2.2.1 Short-term pollution

Existing wastewater collection (sewerage) systems are often 'combined' in that they receive foul sewage from homes and commercial premises, as well as surface water following rainfall. After periods of heavy rain a mixture of surface water and foul sewage can be discharged to the environment via combined sewer overflows (CSOs) and may impact bathing water quality and affect human health.

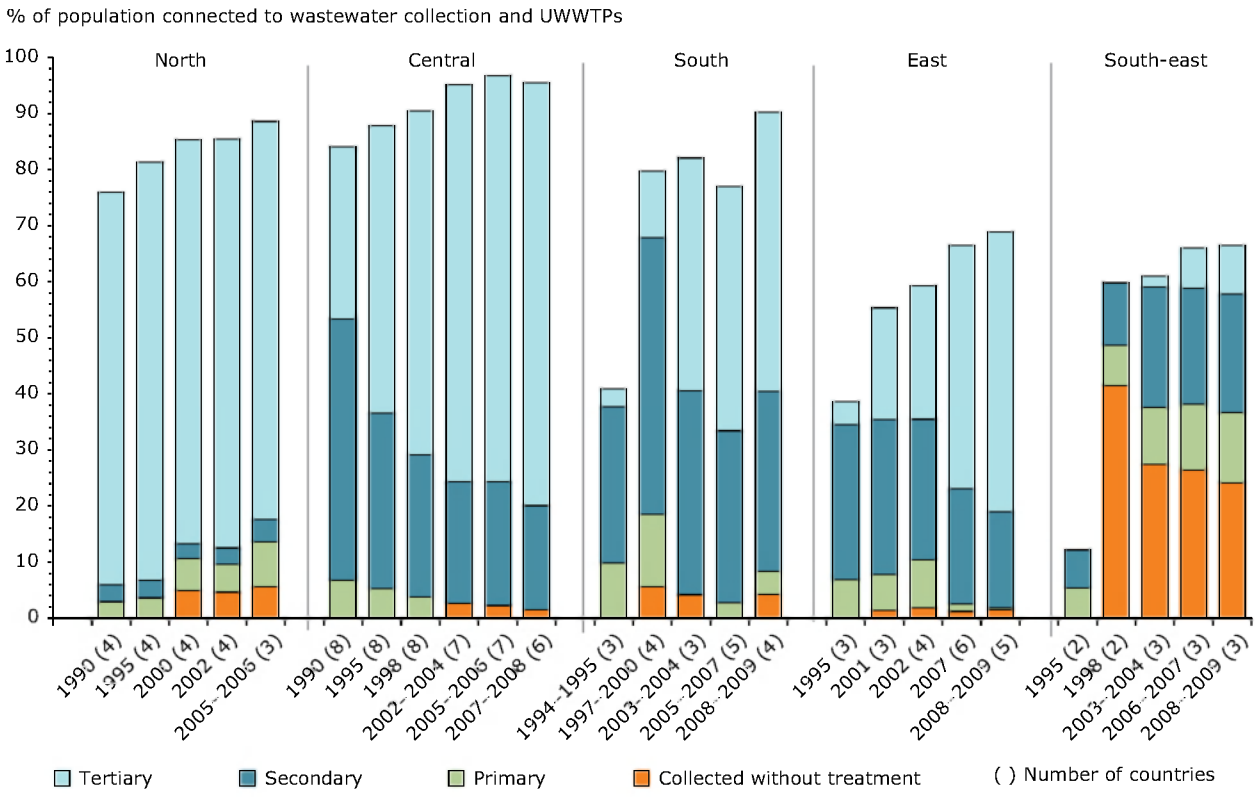
([4]) Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment.
([5]) Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
([6]) Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy.
([7]) http://ec.europa.eu/environment/water/water-urbanwaste/implementation/implementationreports_en.htm.

Where short-term pollution occurs at bathing waters, the new bathing water directive requires that management measures (such as warnings or bathing prohibitions) be implemented to prevent bathers' exposure and to prevent, reduce or eliminate the causes of pollution. Information on short-term pollution should be made available to the public at the bathing site and in the media. In the event of short-term pollution, one additional sample must be taken to confirm that the incident has ended.

Implementation of the UWWTD and a focus on reducing sewer overflow has reduced the wastewater discharge of pollutants to receiving waters. The economic recession of the 1990s in central and eastern European countries also contributed to this fall, as there was a decline in heavily polluting manufacturing industries. Clear improvements in water quality determinants related to urban and industrial wastewater are evident in most of Europe's surface waters, including improvements in bathing water quality. These trends have, however, levelled off in recent years.

Despite national efforts to reduce and eliminate pollution, problems of poor water quality can persist. Affected bathing waters must be closed to eliminate the hazard to bathers' health. Several other reasons, for example construction works, can also lead to the closure of bathing waters.

Figure 2.1 Changes in wastewater treatment in regions of Europe, 1990–2009



Notes: The numbers of countries are given in parentheses. Regional percentages have been weighted by country population.

North: Finland, Iceland, Norway and Sweden, only data up to 2006 are available.

Central: Austria, Denmark, England and Wales, Germany, Ireland, Luxembourg, the Netherlands, Scotland and Switzerland.

South: Cyprus, France, Greece, Malta, Portugal and Spain (Greece only up to 1997 and then since 2007).

East: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia (for Hungary and Latvia only data up to 2007 are available).

South-east: Bulgaria, Romania and Turkey.

The percentage values have been weighted according to country populations when calculating the group values. Data on the population connected to collecting systems without treatment has only been available since the late-1990s.

Source: CSI24/EEA-ETC/ICM, based on data reported to OECD/Eurostat Joint Questionnaire 2010 (July 2011 update).

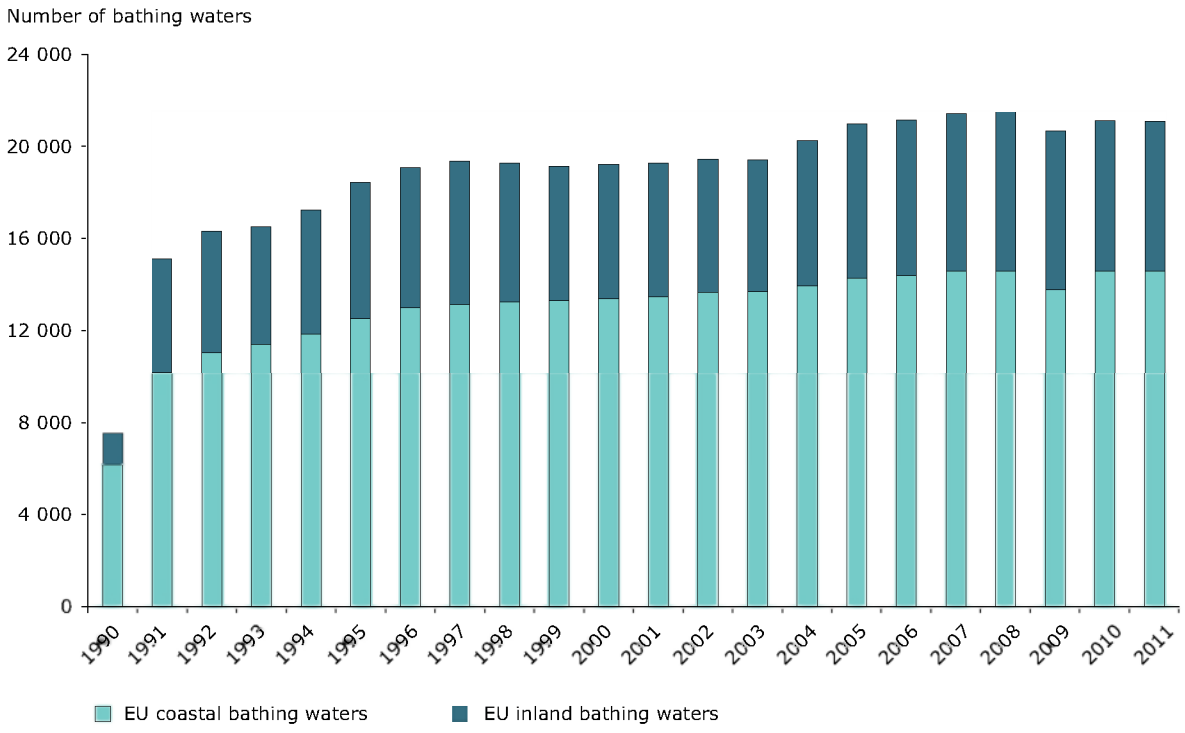
3 Monitoring of bathing waters in 2011

In total there are more than 22 000 bathing waters (27 EU Member States plus Croatia, Montenegro and Switzerland). A total of 26 countries reported inland bathing waters on lakes and rivers. There are no inland bathing waters reported in Cyprus, Malta, Montenegro and Romania. Less than 10 inland bathing water were reported in Bulgaria, Greece, Ireland, and Croatia. In Greece and Croatia, there are very few rivers or lakes suitable for swimming compared to the high number of coastal bathing waters.

The number of bathing waters monitored by EU Member States in 1990 was 7 539 (in seven Member States) and in 1991 the figure was 15 075 (in 12 Member States). In the last five years it has ranged between 20 600 and 21 500 (Figure 3.1).

In 2011 the 27 EU Member States reported 21 031 bathing waters, of which more than two thirds (69 %) are coastal bathing waters. Almost half of all EU coastal bathing waters are located in Italy (34 %) and Greece (15 %), and half of inland bathing waters are in Germany (30 %) and France (20 %). More than a quarter of all bathing waters are located in Italy (5 549) and 16 % (3 333) are in France.

Figure 3.1 Total number of bathing waters reported in the European Union since 1990



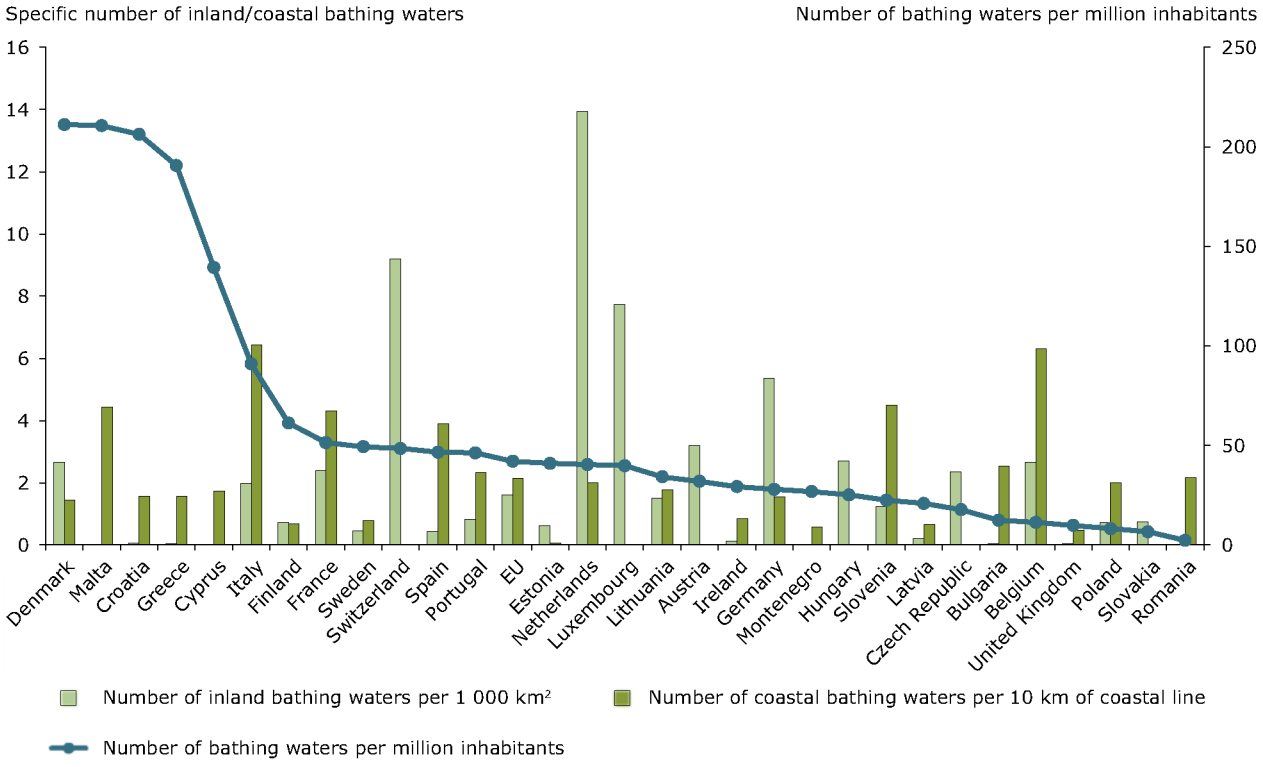
Source: WISE bathing water quality database (data from annual reports by EU Member States).

The EU average is 42 bathing waters per million inhabitants. Denmark, Malta, Croatia and Greece have the largest number of bathing waters per million inhabitants, with around 200 (Figure 3.2).

Italy and Belgium have the highest density of coastal bathing waters, with more than six bathing waters for every 10 kilometres of sea coast, followed by Slovenia, Malta and France.

The EU average is 1.6 inland bathing waters per 1 000 km^2. The Netherlands has the most inland bathing waters compared to the country's area (14 bathing waters per 1 000 km^2), followed by Switzerland and Luxembourg.

Figure 3.2 Reported bathing waters in Europe per million inhabitants, reported inland bathing waters per 1 000 km^2 and reported coastal bathing waters per 10 km of coastline



Source: WISE bathing water quality database (data from annual reports from reporting countries and Eurostat.

4 Bathing water quality and trends in the 2011 season

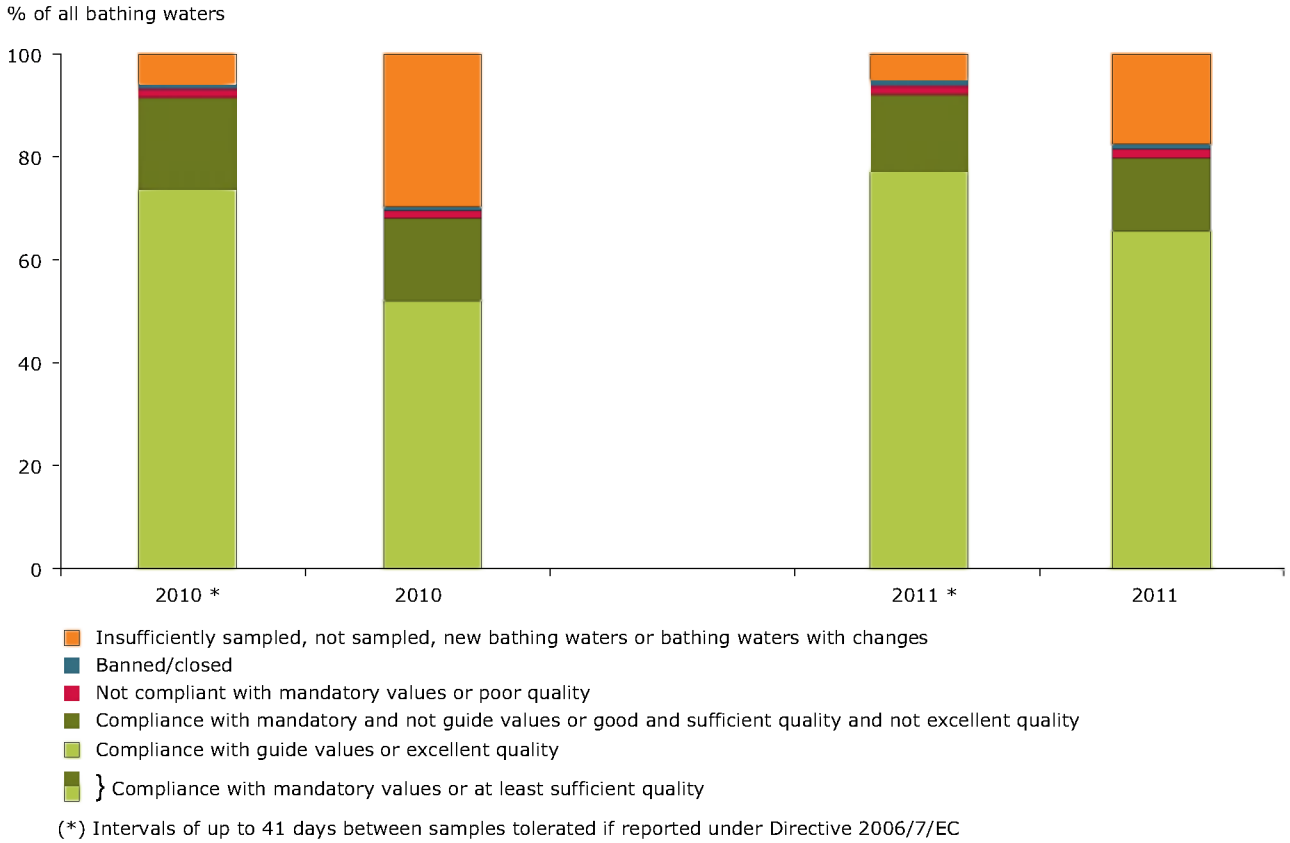
4.1 Overall bathing water quality in the European Union

Overall in 2011, 92.1 % of bathing waters in the EU met the minimum water quality standards set by the bathing water directives (Figure 4.1). Bathing water quality increased at 0.6 % of sites in 2011 compared to 2010. The proportion of bathing waters with excellent quality (or complying with the more stringent guide values) increased by 3.5 percentage points compared to 2010, reaching 77.1 %. The share of non-compliant bathing waters was 1.8 %, which represented a 0.1 percentage point increase from 2010. In 2011, 207 bathing waters were banned or closed (1 %), which was 57 more than in the 2010 season. Many reasons could explain poor quality or closure, for example pollution due to heavy rain or public construction works in the area.

In 2011, 5.2 % of bathing waters were classified as insufficiently sampled (with more than 41 days between samples or lacking a pre-season sample), not sampled, new bathing waters or bathing waters with changes. This represented a 0.9 percentage point decrease from 2010.

Applying the strict rules ([8]), 79.7 % of all bathing waters met the minimum water quality standards

Figure 4.1 Bathing water quality in the European Union in the 2010 and 2011 bathing seasons



(*) Intervals of up to 41 days between samples tolerated if reported under Directive 2006/7/EC

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

([8]) Under the strict rules the interval between sampling should not exceed one month.

set by the bathing water directives (Figure 4.1). This is a 11.7 percentage point improvement from 2010. The number of all bathing waters with excellent quality (or complying with the more stringent guide values) increased by 13.6 percentage points compared to 2010, reaching 65.5 %. In 2011, 1.7 % of bathing waters were non-compliant, which was a 0.1 percentage point increase from 2010. In 2011, 17.6 % of bathing waters were insufficiently sampled, not sampled, new or undergoing changes. This represented a 12.1 percentage point decrease from 2010.

4.2 Coastal bathing water quality in the European Union

Some 93.1 % of coastal bathing waters achieved at least sufficient quality or complied with the mandatory values (Figure 4.2). This was an increase of 1.0 percentage points compared to 2010. Some 80.1 % of coastal bathing waters complied with the more stringent guide values during the 2011 bathing season. The proportion of coastal bathing waters classified as excellent (or compliant with the more stringent guide values) increased by 0.6 percentage points in 2011, compared to 2010.

The EU Member States reported 212 coastal bathing waters (1.5 %) with poor quality or not in compliance with mandatory values in 2011. That represented a 0.3 percentage point increase from 2010. In 1990, 9.2 % of bathing waters did not comply with the bathing water directives' provisions and by 2011 this had fallen to just 1.5 %. There were 139 coastal bathing waters closed in 2011, representing 1.0 % of all coastal bathing waters. This was a 0.7 percentage point increase from 2010 but a 1.3 percentage point decrease from 2009. The remaining coastal bathing waters were insufficiently sampled, not sampled, or newly opened and not yet assessed under the new directive.

Applying the strict rules, 76.4 % of coastal bathing waters met the minimum water quality standards set by the bathing water directives. This was a 17.2 percentage point increase from 2010. The number of coastal bathing waters with excellent quality (or complying with the more stringent guide values) increased by 15.2 percentage points compared to 2010, reaching 64.3 %. In 2011, 21.2 % of bathing waters were classified as insufficiently sampled (with more than one month between samples), not sampled, new bathing waters or bathing water undergoing changes. This presented an 18.2 percentage point decrease from 2010.

Compliance with mandatory values increased from just under 80 % in 1990 to over 95 % in 1999, and has remained quite stable since then. Compliance with guide values likewise rose from 68 % to over 89 % in 2003 and was then nearly constant but dropped below 80 % in 2010 (Figure 4.2). The trend is now positive again.

4.3 Inland bathing water quality in the European Union

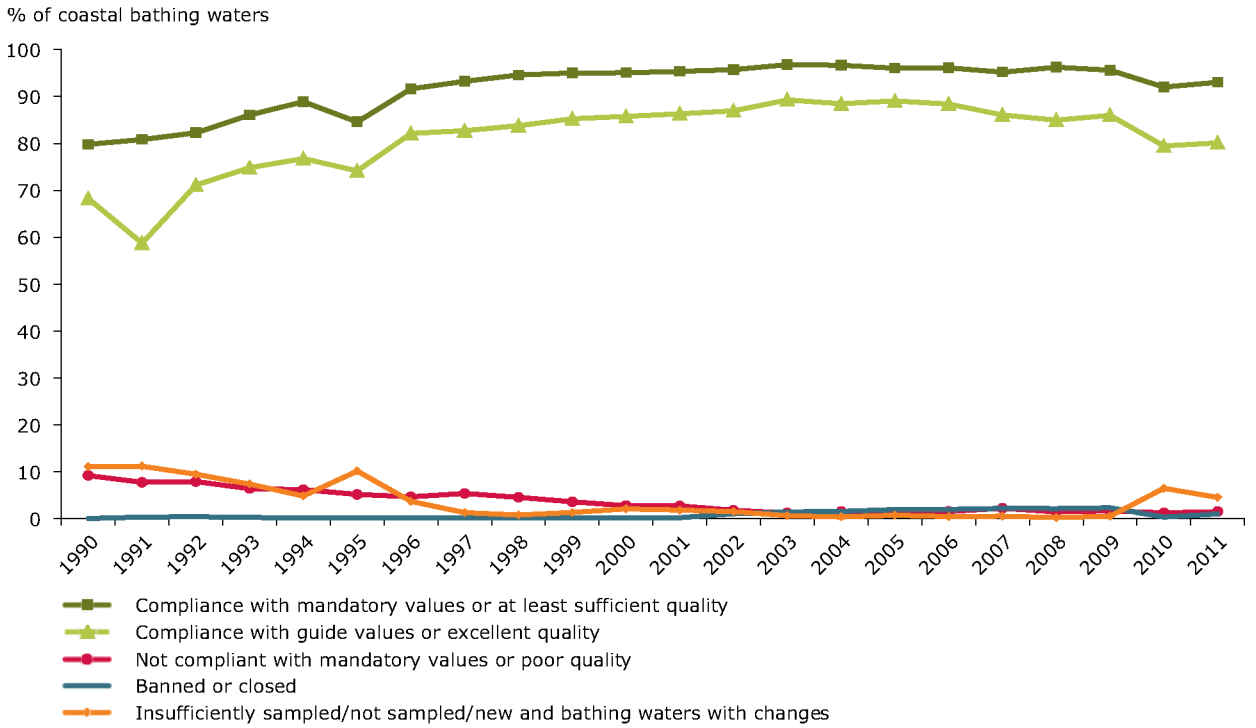
In 2011, 89.9 % of inland bathing waters in the European Union had sufficient quality (or were compliant with the mandatory values) during the bathing season (Figure 4.3). This was a 0.3 percentage point decrease from 2010, but a 0.5 percentage point increase from 2009. The number of inland bathing waters with excellent quality (or complying with the more stringent guide values) increased by 9.9 percentage points compared to 2010, reaching 70.4 %.

Only 2.4 % of inland bathing areas in the European Union had poor quality (or did not comply with mandatory values) in 2011. This represented a 0.4 percentage point decrease compared to 2010. The share of bathing waters that were banned or closed during the bathing season in 2011 was 1.0 %, a decrease of 0.6 percentage points in comparison to 2010 and a decrease of 3.7 percentage points in comparison to 2009. Out of 6 493 inland bathing waters in the EU, 429 (6.6 %) were classified as insufficiently sampled (meaning more than 41 days between sampling dates), not sampled or not yet possible to assess under the new bathing water directive. That compared to 351 such inland bathing waters in 2010 and 185 in 2009.

Applying the strict rules, 87.2 % of inland bathing waters met the minimum water quality standards set by the bathing water directives. This was a 0.3 percentage point decrease from 2010. The number of inland bathing waters with excellent quality (or complying with the more stringent guide values) was 68.2 %, which represented an increase of 9.8 percentage points compared to 2010. In 2011, 9.4 % of inland bathing waters were insufficiently sampled (with more than one month between samples), not sampled, new or undergoing changes. This represented a 1.3 percentage point increase from 2010.

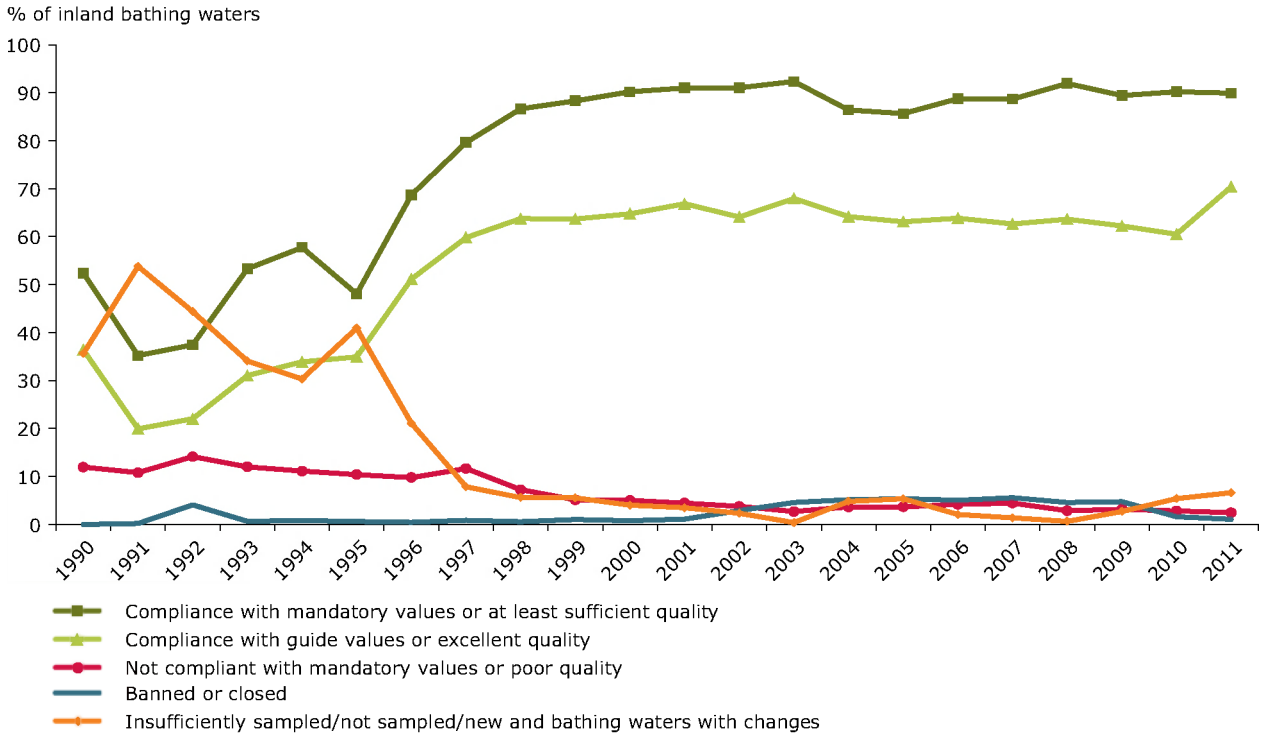
The overall quality of inland bathing areas in the EU has markedly improved since 1990 but with greater variations than coastal bathing waters. In 1990,

Figure 4.2 Percentage of coastal bathing waters in the European Union per compliance category



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

Figure 4.3 Percentage of inland bathing waters in the European Union per compliance category



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

some 52 % of inland bathing areas complied with mandatory values (Figure 4.3). This proportion reached 90 % by the early 2000s and decreased slightly afterwards before recovering to 92 % in 2008. Similarly, the rate of compliance with guide values rose from 36.4 % in 1990 to 68 % in 2003. In 2010, the percentage of inland bathing waters complying with guide values dropped to 60.5 %. In 2011, the quality increased by 9.9 percentage points, reaching 70.4 % — the highest level so far recorded. Furthermore, the number of inland bathing areas not complying with mandatory values decreased from 11.9 % in 1990 to 2.4 % in 2011, which constituted the lowest level to date.

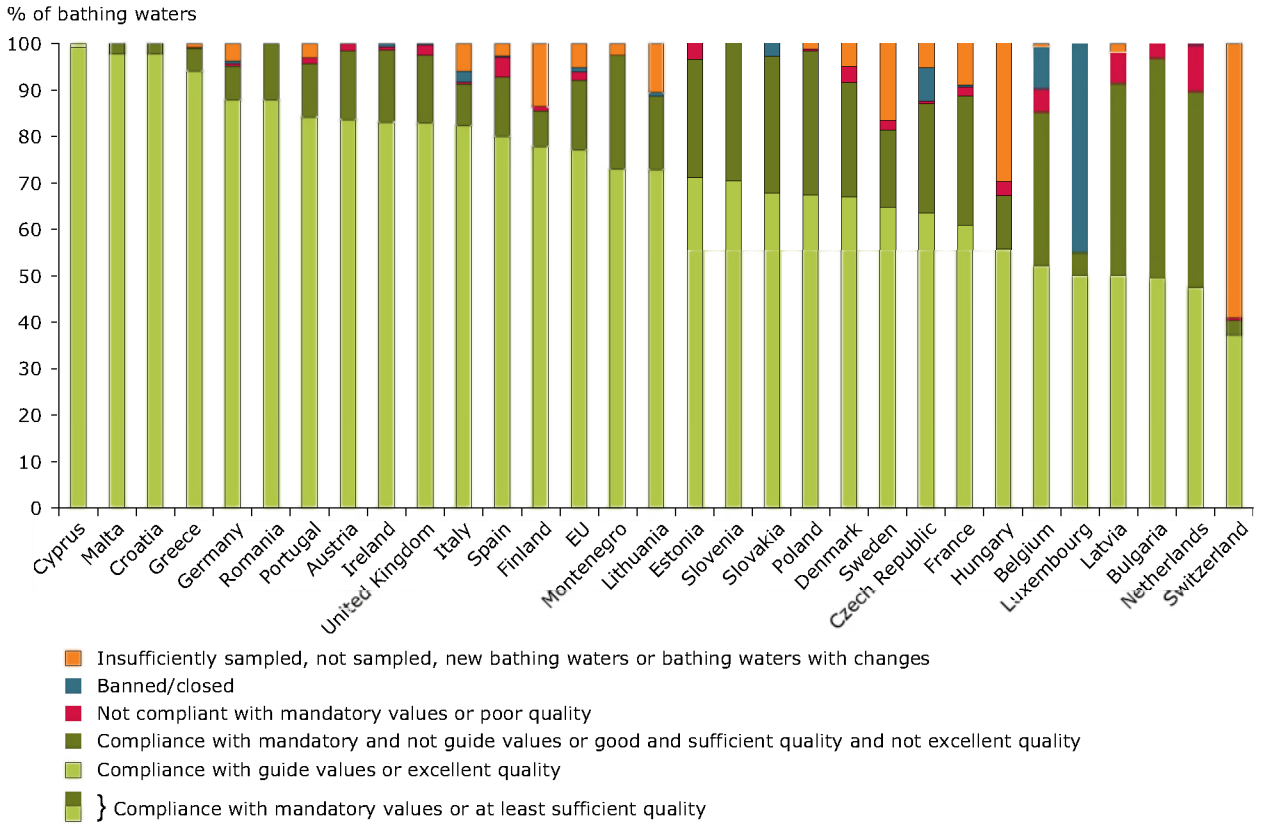
4.4 Bathing water quality by country

European bathing water quality results for each country in the 2011 bathing season are shown in Figure 4.4. Eleven countries reached more than 80 % compliance with the guide values. These were Cyprus (99.1 %), Malta (97.7 %), Croatia (97.7 %), Greece (94.1 %), Germany (87.8 %), Romania (87.8 %), Portugal (84.0 %), Austria (83.5 %), Ireland (83.0 %), the United Kingdom (82.8 %) and Italy (82.3 %). In Malta, Romania, Slovenia and Croatia all bathing waters complied with mandatory values. Twelve other countries also reported more than 95 % compliance with mandatory values: Cyprus, Greece, Ireland, Austria, Poland, Montenegro, the United Kingdom, Slovakia, Bulgaria, Estonia, Portugal and Germany.

In the Netherlands, more than 10 % of waters were found to be poor or non-compliant — the highest proportion of any country. The Netherlands, Bulgaria, Latvia, Luxemburg and Belgium also had remarkably low proportions of sites meeting the strict guide values.

More data on bathing water quality is available at the EEA's bathing water website, including maps of bathing water quality in the different sea regions (see Chapter 6).

Figure 4.4 Bathing water quality results in 2011 for the 27 EU Member States and other countries with bathing water quality results



Source: WISE bathing water quality database (data from annual reports by reporting countries).

5 New symbols for informing on bathing water quality

The new bathing water directive is ambitious regarding the provision of information to the public on bathing water quality. As a general principle, Members States must ensure that the public receives appropriate information on the results of implementing the directive.

The new bathing water directive ensures timely information for the public during the bathing season, obliging Member States to disseminate information on bathing water quality actively and promptly. In particular, notices banning or advising against bathing should be rapidly and easily identifiable. After consulting Member States and stakeholders, on 27 May 2011 the Commission adopted a decision establishing a symbol ([9]) for informing the public on bathing water classification and bathing prohibitions.

In addition, the new bathing water directive requires Member States to establish bathing water profiles in March 2011. A bathing water profile, covering single bathing waters or two or more contiguous bathing waters, is primarily intended to gain

Photo: © Peter Kristensen

([9]) Commission Implementing Decision of 27 May 2011 establishing, pursuant to Directive 2006/7/EC of the European Parliament and of the Council, a symbol for information to the public on bathing water classification and any bathing prohibition or advice against bathing (2011/321/EU).

an understanding of the sources and routes of bacteriological pollution, focusing on the indicators for faecal pollution. The profile should ensure a connection with the implementation of the Water Framework Directive. The bathing water profile can be used to substantiate chosen management measures efficiently, and can also ultimately lead to better bathing water quality. A summary of the information contained in the profiles should be displayed on notices at bathing waters and on internet.

Figure 5.1 Symbols for prohibited bathing sites and advice against bathing

Note: EPS files may be downloaded from http://ec.europa.eu/environment/water/water-bathing/signs.htm.

Figure 5.2 Symbols for bathing water classification

Note: EPS files may be downloaded from http://ec.europa.eu/environment/water/water-bathing/signs.htm.

6 Bathing water quality near you

The present report sets out the results and trends in bathing water quality in 2011. More information on bathing water quality in EU Member States — including the reports for 27 EU Member States and Croatia, Montenegro and Switzerland can be found on the European Environment Agency's bathing water website ([10]) and the European Commission's bathing water quality website ([11]).

6.1 Interactive information on bathing water quality — WISE and Eye on Earth

The bathing water section of the Water Information System for Europe (WISE), which is accessible at the EEA bathing water website ([10]), allows users to view the bathing water quality at more than 22 000 coastal beaches and inland sites across Europe. Users can check bathing water quality on an interactive map or can download data for a selected country or region and make comparisons with previous years.

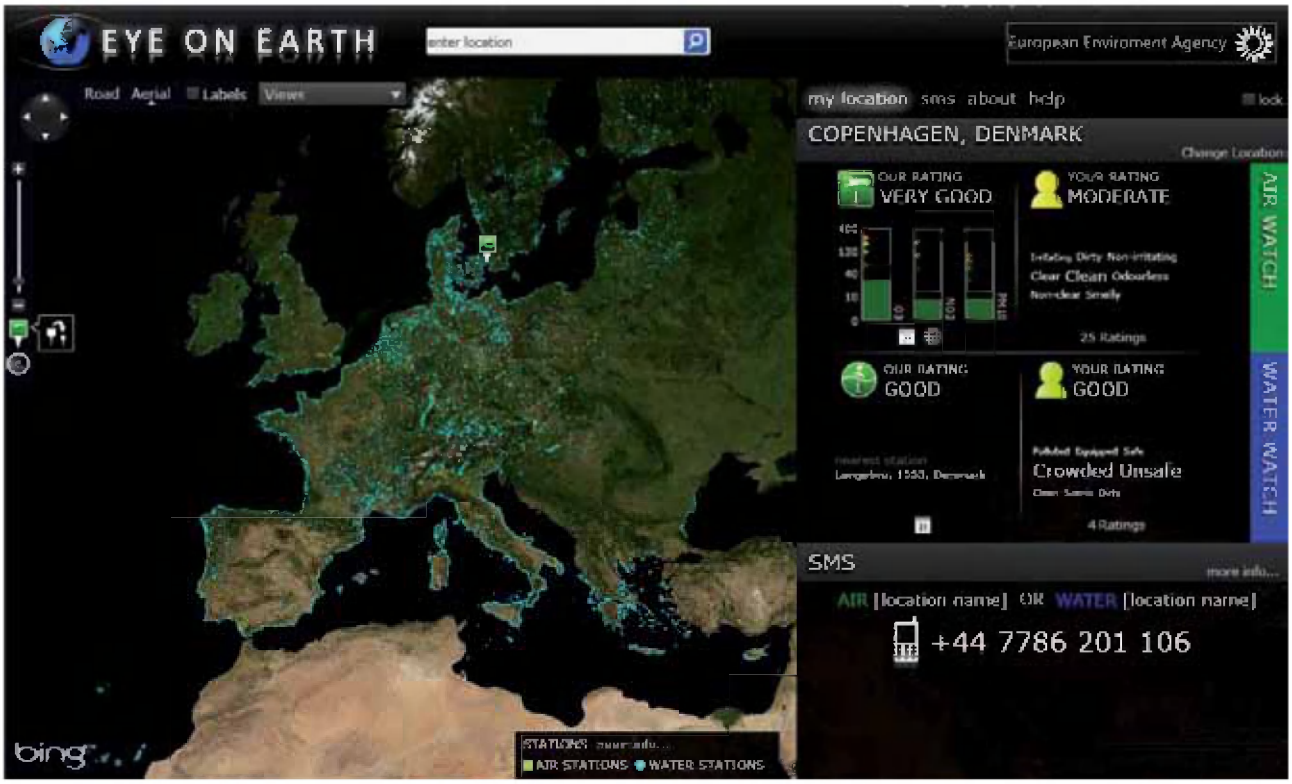
The **WISE map viewer** is an online map viewer for visualising European spatial water data. It includes a lot of interactive layers, allowing water themes to be visualised at different scales. Broad resolutions display the aggregated data by Member State. At finer resolutions the locations of monitoring stations are displayed.

The **WISE bathing water quality data viewer** combines text and graphical visualisation, providing a quick check on locations and statistics on the quality of coastal and inland bathing waters. It also documents how bathing waters have changed

Photo: © Peter Kristensen

([10]) http://www.eea.europa.eu/themes/water/status-and-monitoring/state-of-bathing-water.
([11]) http://ec.europa.eu/environment/water/water-bathing/index_en.html.

Figure 6.1 Eye on Earth — Water Watch



Note: The Eye on Earth — Water Watch application is available at http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/eye-on-earth.

throughout Europe in recent years and provides a full summary of Europe's bathing water quality. Users can search information at three spatial levels — country, region and province — and observe specific bathing water locations on Google Earth, Google Maps or Bing Maps.

The Eye on Earth — Water Watch (Figure 6.1) application allows users to zoom in on a section of the coast, riverbank or lake, both in street map or, where available, bird's eye viewing formats. A 'traffic-light' indicator (red, amber, green) of bathing water quality, based on the official bathing water data, is put alongside the ratings of people who have visited the bathing site, including any comments added by users. For historical data Water Watch uses a simplified index of bathing water quality data. During 2012, the Eye on Earth application will be updated with online bathing water quality results, providing an indication of the current quality.

6.2 National and local information on bathing water quality

In order to make information to the public more effective, all EU Member States have national or local web portals with detailed information for each bathing water. Websites generally include a map search function and public access to the monitoring results both in real time and for previous seasons.

6.3 Information on EU bathing water legislation

EU Member States will have to comply with the stricter and more ambitious requirements laid out in the new bathing water directive by 2015 at the latest. The new legislation requires more effective monitoring and management of bathing waters, greater public participation and improved information dissemination. More on the new legislation can be found on the European Commission's website ([12]).

Citizens now have access to more bathing water information than ever. We encourage you all to make full use of all the information sources presented in this publication. We also encourage you to get more actively involved in protecting the environment and helping to improve Europe's bathing areas.

Citizens also share a sincere interest in the quality of the marine environment and inland waters more generally. Efforts to improve the quality of bathing waters should therefore not be seen in isolation but in the context of the good ecological and environmental status we aim for in implementing the water and marine framework directives.

In addition to good quality of bathing waters, we need clean unpolluted water for our ecosystems and economic activities such as tourism. Plants and animals in freshwaters react to changes in their environment caused by changes in water quality. Having excellent bathing water quality does not necessarily imply that the water quality is good enough for our ecosystems. We need to manage our water resources well to sustain human and economic development and improve the essential functions of our water ecosystems. The solutions lie in more integrated and sustainable water resource management, including full implementation of the Water Framework Directive, with the aim that all water bodies should have achieved 'good status' by 2015.

Photo: © Peter Kristensen

([12]) http://ec.europa.eu/environment/water/water-bathing/index_en.html; http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:064:0037:0051:EN:PDF.

Annex 1 Member State reporting under the bathing water directives, 2007–2011

	Reporting and monitoring					Assessment of bathing water quality		
	2007	2008	2009	2010	2011	2009	2010	2011
AT (Austria	Old	Old	Old	New	New	Old	Trans.	Trans.
BE (Belgium) ([a])	Old	Old	Old	Old and new	New	Old	Trans.	New
BG (Bulgaria)	Old	Old	Old	Old	New	Old	Old	Trans.
CY (Cyprus)	Old	New	New	New	New	Trans.	Trans.	New
CZ (Czech Republic)	Old	Old	Old	Old	Old	Old	Old	Old
DE (Germany)	Old	New	New	New	New	Trans.	Trans.	New
DK (Denmark)	Old	New	New	New	New	Trans.	Trans.	New
EE (Estonia)	Old	New	New	New	New	Trans.	Trans.	New
ES (Spain)	Old	New	New	New	New	Trans.	Trans.	New
FI (Finland)	Old	New	New	New	New	Trans.	Trans.	New
FR (France)	Old	Old	Old	New	New	Old	Trans.	Trans.
GR (Greece) ([b])	Old	Old	Old	New	New	Old	Trans.	New
HU (Hungary) ([c])	Old	New	New	New	New	Trans.	New	New
IE (Ireland)	Old	Old	Old	Old	New	Old	Old	Trans.
IT (Italy)	Old	Old	Old	New	New	Old	Trans.	Trans.
LT (Lithuania)	Old	New	New	New	New	Trans.	Trans.	New
LU (Luxembourg) ([d])	New	New	New	New	New	New	New	New
LV (Latvia)	Old	New	New	New	New	Trans.	Trans.	New
MT (Malta) ([e])	Old	Old	New	New	New	New	New	New
NL (Netherlands)	Old	Old	New	New	New	Trans.	Trans.	Trans.
PL (Poland)	Old	Old	Old	Old	New	Old	Old	Trans.
PT (Portugal) ([f])	Old	Old	Old	New	New	Old	Trans.	New
RO (Romania)	Old	Old	Old	Old	Old	Old	Old	Old
SE (Sweden) ([g])	Old	New	New	New	New	Trans.	Trans.	New
SI (Slovenia)	Old	Old	Old	New	New	Old	Trans.	Trans.
SK (Slovakia)	Old	New	New	New	New	Trans.	Trans.	New
UK (United Kingdom)	Old	Old	Old	Old	Old	Old	Old	Old
CH (Switzerland) ([h])	–	–	New	New	New	Trans.	Trans.	Trans.
HR (Croatia)	–	–	New	New	New	Trans.	Trans.	Trans.
ME (Montenegro)	–	–	–	New	New	–	Trans.	Trans.

Note: 'Old' indicates reporting or assessment under Directive 76/160/EEC. 'New' indicates reporting or assessment under Directive 2006/7/EC. 'Trans.' indicates assessment under the transition period rules.

([a]) In 2010, the Walloon region of Belgium sent data for intestinal enterococci and *Escherichia coli* and historical data for the years 2007–2009. In 2011 the Flemish region of Belgium submitted data for the years 2008–2010.

([b]) In 2010, Greece submitted historical data for intestinal enterococci and *Escherichia coli* for the years 2007–2009.

([c]) In 2010, Hungary submitted historical data for intestinal enterococci and *Escherichia coli* for 2007.

([d]) In 2009, Luxembourg submitted historical data for intestinal enterococci and *Escherichia coli* for 2006.

([e]) In 2009, Malta submitted historical data for intestinal enterococci and *Escherichia coli* for the years 2006–2008.

([f]) In 2010, Portugal submitted historical data for intestinal enterococci and *Escherichia coli* for some bathing waters for the years 2007–2009. In 2011 Portugal submitted historical data for all bathing waters for 2008 and 2009.

([g]) In 2008, Sweden submitted historical data for intestinal enterococci and *Escherichia coli* for some bathing waters for the years 2005–2007.

([h]) In 2010, Switzerland submitted historical data for *Escherichia coli* and intestinal enterococci for some bathing waters for the years 2007–2008.

Annex 2 Bathing water quality results in 2011

All bathing waters	Assessment type	Total number of bathing waters	Compliance with guide values or excellent quality		Compliance with mandatory and not guide values or good and sufficient quality and not excellent		Non-complying or poor		Banned or closed		Insufficiently sampled or not sampled/new bathing waters /bathing waters with changes	
			Number	%	Number	%	Number	%	Number	%	Number	%
AT (Austria)	Transition	267	223	83.5	40	15.0	4	1.5	0	0.0	0	0.0
BE (Belgium)	New	121	63	52.1	40	33.1	6	5.0	11	9.1	1	0.8
BG (Bulgaria)	Transition	93	46	49.5	44	47.3	3	3.2	0	0.0	0	0.0
CY (Cyprus)	New	112	111	99.1	0	0.0	0	0.0	0	0.0	1	0.9
CZ (Czech Republic)	Old	183	116	63.4	43	23.5	1	0.5	13	7.1	10	5.5
DE (Germany)	New	2 310	2 028	87.8	168	7.3	15	0.6	13	0.6	86	3.7
DK (Denmark)	New	1 130	755	66.8	277	24.5	40	3.5	0	0.0	58	5.1
EE (Estonia)	New	55	39	70.9	14	25.5	2	3.6	0	0.0	0	0.0
ES (Spain)	New	2 152	1 720	79.9	278	12.9	90	4.2	6	0.3	58	2.7
FI (Finland)	New	323	251	77.7	25	7.7	3	0.9	0	0.0	44	13.6
FR (France)	Transition	3 333	2 026	60.8	922	27.7	67	2.0	11	0.3	307	9.2
GR (Greece)	New	2 155	2 027	94.1	105	4.9	5	0.2	0	0.0	18	0.8
HU (Hungary)	New	228	127	55.7	26	11.4	7	3.1	0	0.0	68	29.8
IE (Ireland)	Transition	135	112	83.0	21	15.6	1	0.7	1	0.7	0	0.0
IT (Italy)	Transition	5 549	4 568	82.3	493	8.9	23	0.4	137	2.5	328	5.9
LT (Lithuania)	New	114	83	72.8	18	15.8	0	0.0	1	0.9	12	10.5
LU (Luxembourg)	New	20	10	50.0	1	5.0	0	0.0	9	45.0	0	0.0
LV (Latvia)	New	46	23	50.0	19	41.3	3	6.5	0	0.0	1	2.2
MT (Malta)	New	87	85	97.7	2	2.3	0	0.0	0	0.0	0	0.0
NL (Netherlands)	Transition	690	327	47.4	291	42.2	70	10.1	2	0.3	0	0.0
PL (Poland)	Transition	220	148	67.3	68	30.9	1	0.5	0	0.0	3	1.4
PT (Portugal)	New	514	432	84.0	60	11.7	6	1.2	0	0.0	16	3.1
RO (Romania)	Old	49	43	87.8	6	12.2	0	0.0	0	0.0	0	0.0
SE (Sweden)	New	447	289	64.7	74	16.6	9	2.0	0	0.0	75	16.8
SI (Slovenia)	Transition	47	33	70.2	14	29.8	0	0.0	0	0.0	0	0.0
SK (Slovakia)	New	34	23	67.6	10	29.4	0	0.0	1	2.9	0	0.0
UK (United Kingdom)	Old	617	511	82.8	90	14.6	14	2.3	2	0.3	0	0.0
EU		**21 031**	**16 219**	**77.1**	**3 149**	**15.0**	**370**	**1.8**	**207**	**1.0**	**1 086**	**5.2**
CH (Switzerland)	Transition	352	131	37.2	11	3.1	2	0.6	0	0.0	208	59.1
HR (Croatia)	Transition	910	889	97.7	21	2.3	0	0.0	0	0.0	0	0.0
ME (Montenegro)	Transition	81	59	72.8	20	24.7	0	0.0	0	0.0	2	2.5
Europe		**22 374**	**17 298**	**77.3**	**3 201**	**14.3**	**372**	**1.7**	**207**	**0.9**	**1 296**	**5.8**

Note: More data on bathing water quality are available at http://www.eea.europa.eu/themes/water/interactive/bathing.

Source: EEA.

Annex 3 Coastal bathing water quality results in 2011

Coastal bathing waters	Assessment type	Total number of bathing waters	Compliance with guide values or excellent quality		Compliance with mandatory and not guide values or good and sufficient quality and not excellent		Non-complying or poor		Banned or closed		Insufficiently sampled or not sampled/new bathing waters /bathing waters with changes	
			Number	%	Number	%	Number	%	Number	%	Number	%
BE (Belgium)	New	42	16	38.1	26	61.9	0	0.0	0	0.0	0	0.0
BG (Bulgaria)	Transition	89	45	50.6	41	46.1	3	3.4	0	0.0	0	0.0
CY (Cyprus)	New	112	111	99.1	0	0.0	0	0.0	0	0.0	1	0.9
DE (Germany)	New	372	280	75.3	79	21.2	6	1.6	0	0.0	7	1.9
DK (Denmark)	New	1 012	657	64.9	269	26.6	39	3.9	0	0.0	47	4.6
EE (Estonia)	New	27	13	48.1	12	44.4	2	7.4	0	0.0	0	0.0
ES (Spain)	New	1 927	1 619	84	210	10.9	61	3.2	3	0.2	34	1.8
FI (Finland)	New	85	60	70.6	17	20.0	3	3.5	0	0.0	5	5.9
FR (France)	Transition	2 029	1 321	65.1	417	20.6	44	2.2	0	0.0	247	12.2
GR (Greece)	New	2 149	2 023	94.1	103	4.8	5	0.2	0	0.0	18	0.8
IE (Ireland)	Transition	126	106	84.1	18	14.3	1	0.8	1	0.8	0	0.0
IT (Italy)	Transition	4 902	4 069	83	437	8.9	21	0.4	133	2.7	242	4.9
LT (Lithuania)	New	16	13	81.3	3	18.8	0	0.0	0	0.0	0	0.0
LV (Latvia)	New	32	14	43.8	16	50.0	2	6.3	0	0.0	0	0.0
MT (Malta)	New	87	85	97.7	2	2.3	0	0.0	0	0.0	0	0.0
NL (Netherlands)	Transition	87	59	67.8	26	29.9	2	2.3	0	0.0	0	0.0
PL (Poland)	Transition	89	72	80.9	17	19.1	0	0.0	0	0.0	0	0.0
PT (Portugal)	New	431	380	88.2	38	8.8	2	0.5	0	0.0	11	2.6
RO (Romania)	Old	49	43	87.8	6	12.2	0	0.0	0	0.0	0	0.0
SE (Sweden)	New	249	137	55	60	24.1	7	2.8	0	0.0	45	18.1
SI (Slovenia)	Transition	21	20	95.2	1	4.8	0	0.0	0	0.0	0	0.0
UK (United Kingdom)	Old	605	504	83.3	85	14.0	14	2.3	2	0.3	0	0.0
EU		**14 538**	**11 647**	**80.1**	**1 883**	**13.0**	**212**	**1.5**	**139**	**1.0**	**657**	**4.5**
HR (Croatia)	Transition	906	886	97.8	20	2.2	0	0.0	0	0.0	0	0.0
ME (Montenegro)	Transition	81	59	72.8	20	24.7	0	0.0	0	0.0	2	2.5
Europe		**15 525**	**12 592**	**81.1**	**1 923**	**12.4**	**212**	**1.4**	**139**	**0.9**	**659**	**4.2**

Note: More data on bathing water quality are available at http://www.eea.europa.eu/themes/water/interactive/bathing.

Source: EEA.

Annex 4 Inland bathing water quality results in 2011

Inland bathing waters	Assessment type	Total number of bathing waters	Compliance with guide values or excellent quality		Compliance with mandatory and not guide values or good and sufficient quality and not excellent		Non-complying or poor		Banned or closed		Insufficiently sampled or not sampled/new bathing waters /bathing waters with changes	
			Number	%	Number	%	Number	%	Number	%	Number	%
AT (Austria)	Transition	267	223	83.5	40	15.0	4	1.5	0	0.0	0	0.0
BE (Belgium)	New	79	47	59.5	14	17.7	6	7.6	11	13.9	1	1.3
BG (Bulgaria)	Transition	4	1	25	3	75.0	0	0.0	0	0.0	0	0.0
CZ (Czech Republic)	Old	183	116	63.4	43	23.5	1	0.5	13	7.1	10	5.5
DE (Germany)	New	1 938	1 748	90.2	89	4.6	9	0.5	13	0.7	79	4.1
DK (Denmark)	New	118	98	83.1	8	6.8	1	0.8	0	0.0	11	9.3
EE (Estonia)	New	28	26	92.9	2	7.1	0	0.0	0	0.0	0	0.0
ES (Spain)	New	225	101	44.9	68	30.2	29	12.9	3	1.3	24	10.7
FI (Finland)	New	238	191	80.3	8	3.4	0	0.0	0	0.0	39	16.4
FR (France)	Transition	1 304	705	54.1	505	38.7	23	1.8	11	0.8	60	4.6
GR (Greece)	New	6	4	66.7	2	33.3	0	0.0	0	0.0	0	0.0
HU (Hungary)	New	228	127	55.7	26	11.4	7	3.1	0	0.0	68	29.8
IE (Ireland)	Transition	9	6	66.7	3	33.3	0	0.0	0	0.0	0	0.0
IT (Italy)	Transition	647	499	77.1	56	8.7	2	0.3	4	0.6	86	13.3
LT (Lithuania)	New	98	70	71.4	15	15.3	0	0.0	1	1.0	12	12.2
LU (Luxembourg)	New	20	10	50	1	5.0	0	0.0	9	45.0	0	0.0
LV (Latvia)	New	14	9	64.3	3	21.4	1	7.1	0	0.0	1	7.1
NL (Netherlands)	Transition	603	268	44.4	265	43.9	68	11.3	2	0.3	0	0.0
PL (Poland)	Transition	131	76	58	51	38.9	1	0.8	0	0.0	3	2.3
PT (Portugal)	New	83	52	62.7	22	26.5	4	4.8	0	0.0	5	6.0
SE (Sweden)	New	198	152	76.8	14	7.1	2	1.0	0	0.0	30	15.2
SI (Slovenia)	Transition	26	13	50	13	50.0	0	0.0	0	0.0	0	0.0
SK (Slovakia)	New	34	23	67.6	10	29.4	0	0.0	1	2.9	0	0.0
UK (United Kingdom)	Old	12	7	58.3	5	41.7	0	0.0	0	0.0	0	0.0
EU		**6 493**	**4 572**	**70.4**	**1 266**	**19.5**	**158**	**2.4**	**68**	**1.0**	**429**	**6.6**
CH (Switzerland)	Transition	352	131	37.2	11	3.1	2	0.6	0	0.0	208	59.1
HR (Croatia)	Transition	4	3	75	1	25.0	0	0.0	0	0.0	0	0.0
Europe		**6 849**	**4 706**	**68.7**	**1 278**	**18.7**	**160**	**2.3**	**68**	**1.0**	**637**	**9.3**

Note: More data on bathing water quality are available at http://www.eea.europa.eu/themes/water/interactive/bathing.

Source: EEA.

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