

Did you know?

Ireland has more than 73,000 km of river channels. If placed end-to-end, they could encircle the Earth almost twice. Three-quarters of these channels are very small streams that typically flow into larger rivers.

The longest and largest river in Ireland is the Shannon. It runs for more than 360 km from its source to the sea and discharges on average more than 200,000 litres of water per second into the Shannon estuary at Limerick, where it enters the sea. That is the same volume as 5 Olympic-sized swimming pools every minute!

Half of all the endangered freshwater pearl mussels in Europe live in Irish rivers.

Riverbanks provide wildlife corridors through the countryside and give food and shelter for a wide range of animals and plants. They also serve as an important habitat for many wildflowers that support butterflies and bees.

Biological monitoring has been carried out in Irish rivers since 1971. The current national river monitoring programme covers more than 13,000 km of river channel.



European Union Water Framework Directive

Rivers are assessed under the European Union Water Framework Directive (WFD). Having a single European framework to assess water quality allows us to compare our results across Europe. Rivers are classified into five quality classes (status) under the WFD:

1. High

2. Good

3. Moderate

4. Poor

5. Bad

'High' is when the water is not polluted at all, and 'bad' is when the water is most polluted.

The WFD allows us to see what actions are needed to achieve 'good' status or to protect 'good' status where it already exists. We can restore rivers to 'good' status by using targeted actions and measures to reduce the impact of human activities.

National river monitoring programme

The national monitoring programme is run by the EPA and focuses on the main river channels rather than the smaller streams. The programme includes more than 2,800 sites sampled for biology, with almost half of these also being sampled for physical and chemical parameters.

What is monitored?

The biological monitoring assesses:

- invertebrates (animals without a backbone),
- aquatic plants,
- diatoms (type of algae), and
- fish (monitored by Inland Fisheries Ireland).

The chemical parameters measured include:

- dissolved oxygen, and
- nutrients like nitrogen and phosphorus.

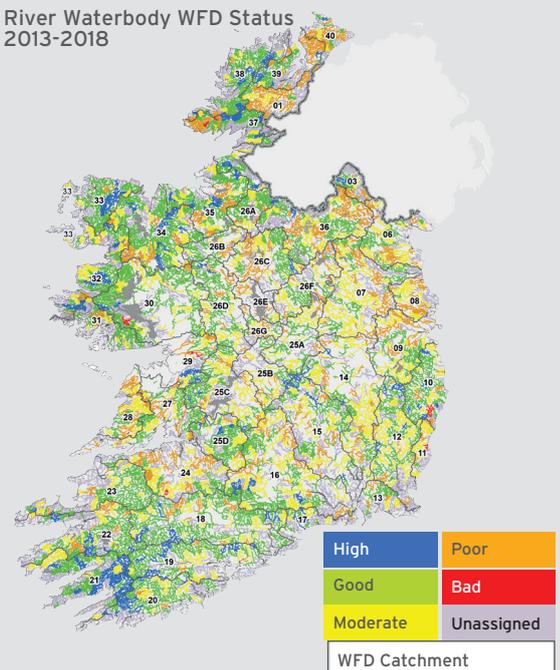
The physical parameters include:

- temperature, and
- pH (acidity).

The biology is monitored once every three years, while the physical and chemical parameters are measured several times a year.

The map on the right shows the status of the main rivers around the country.

River Waterbody WFD Status 2013-2018



River water assessment

Healthy rivers are an important natural resource and they:

- support many species and habitats,
- provide a source of clean water for domestic, agricultural and industrial use, and
- support recreational activities and tourism.

The quality of our most polluted rivers has improved due to measures including:

- better urban waste water treatment, and
- reducing the loss of nutrients such as phosphorus and nitrogen from agricultural lands.

Nevertheless, while river water quality in Ireland compares favourably to that in Europe, we continue to see a worrying trend in the loss of our highest quality river sites and an increase in the number of poor quality sites.



Over half (53%) of the monitored river water bodies in Ireland are at 'good' and 'high' ecological status while the remainder are at less than good (47%). The number of water bodies at bad ecological status has more than halved since 2007-2009. This is because serious pollution from industrial and urban wastewater has been addressed.

Excess nutrients, like phosphorus and nitrogen, cause most problems in Irish rivers so it is important to minimise nutrient losses to water. Irish rivers also face threats from:

- siltation (suspended particles of sediment in water that clog river beds),
- invasive alien species (plants or animals that are not native and threaten native species),
- physical changes (such as dredging),
- climate change, and
- chemicals to kill insects (insecticides) and to kill plants (herbicides).

Additional information about river water quality in Ireland and the environmental pressures on our rivers can be found at www.rivers.ie and www.catchments.ie

The ecological status of rivers in Ireland

Ecological status	High	Good	Moderate	Poor	Bad
Percentage of rivers at each ecological status	8%	45%	28%	19%	<1%

For the latest information go to
www.catchments.ie and
<https://gis.epa.ie/EPAMaps/>