

# **Assessing Marine Water Quality**



## Did you know?

- Ireland has 7,500 km of coast and one of the largest sea areas in the EU.
- Ireland has a seabed territory of about 880,000 km2. This is more than 10 times the size
  of the island of Ireland itself.
- In 2021 the direct economic value of the Irish ocean economy was worth €2.1 billion. (Ireland's Ocean Economy Report, 2022, SEMRU and Marine Institute).

Ireland's coastline contributes to our citizens' wellbeing, health and quality of life.

In 2021 the Irish ocean economy was worth

**€2.1** bn











### National marine water quality assessments

The water quality of Ireland's transitional (estuaries) and coastal waters is assessed by the Environmental Protection Agency (EPA) using information from:

- FPA
- · Marine Institute,
- Inland Fisheries Ireland, and
- · National Parks and Wildlife Service.

As our tidal waters cover more than 14,000 km², the area is broken down into more manageable units called water bodies. A representative number of these water bodies are assessed to provide an overall indication of the quality (status) of Ireland's marine waters. Currently 156 transitional and 98 coastal waters are included.

#### What is assessed in monitored marine waters?

Both the plants and animals (biological communities) as well as chemical measurements in each water body are monitored. The biological communities include:

- tiny free-floating plants (phytoplankton),
- animals without a backbone living in the bottom muds (benthic invertebrates),
- fish,
- opportunistic seaweeds (seaweeds that grow very quickly when environmental conditions suit causing large accumulations

- of plant matter, for example sea lettuce),
- rocky shore seaweeds,
- seagrass (the only true marine plant found in Irish waters); and
- saltmarsh (a community of salt tolerant plants that form a band along the upper tidal limit of water bodies).

The assessment also measures:

- · dissolved oxygen, and
- nutrients, including nitrogen and phosphorus and
- specific chemical pollutants.





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#### Marine waters assessment

Ecologically healthy marine waters are a valuable natural resource. They support a rich and diverse range of ecosystems, habitats and species, and they are also a source of food – from wild fisheries and aquaculture. They are also important for recreational activities and tourism.

Transitional and coastal waters are assessed under the European Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD). Having coordinated frameworks for water quality for all the water bodies in Ireland, and across Europe, allows us to compare our results with other countries. It allows us to see what works to help us make sure all our water bodies achieve at least 'good' status, and no deterioration occurs.

Human activities can cause pollution. We can restore water bodies to 'good' status by doing something about these activities. Under the WFD, waters are classified into five quality categories ('ecological status').

<b>1.</b> High	<b>2.</b> Good	<b>3.</b> Moderate	<b>4.</b> Poor	<b>5.</b> Bad
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<sup>&#</sup>x27;High' is when the water is not polluted at all, and 'bad' is when the water is most polluted.

## The ecological status of transitional and coastal waters

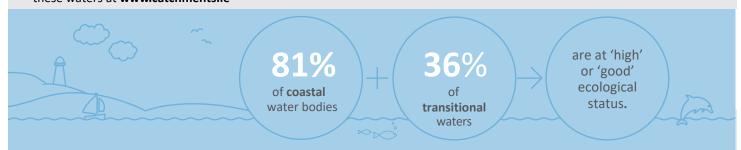
Over four-fifths (81%) of coastal water bodies and over a third (36%) of transitional waters are at 'high' or 'good' ecological status. This means that about a fifth (19%) and almost two-thirds (64%) of coastal and transitional waters, respectively, will need measures to be taken so as to achieve the objectives of the WFD.

Numbers of waters in each ecological status class:

Ecological status	'High'	'Good'	'Moderate'	'Poor'	'Bad'
Number of transitional waters at each ecological status (Total = 156)	28	28	78	18	4
Number of coastal waters at each ecological status (Total = 98)	44	35	17	1	1

Percentages do not add to 100% due to rounding.

You can find more information about transitional and coastal water quality in Ireland and the environmental pressures on these waters at **www.catchments.ie** 



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



