

# Marine algal blooms



Noddir gan  
**Lywodraeth Cymru**  
Sponsored by  
**Welsh Government**

**Natural Resources Wales receives many enquiries about the quality of coastal waters. Most are about genuine pollution incidents, but sometimes they relate to algal blooms that are a natural feature in our seas. This leaflet explains what marine algal blooms are, how they affect you and what you should do if you see one.**

## **What are marine algae?**

Marine algae live naturally in seas and oceans around the world. They include seaweeds and tiny plants suspended in the water. They can look like green flakes, greenish bundles or brownish dots.





## What are blooms?

A lot of algae in the same place, which make sea water look discoloured, is called an algal bloom.

A bloom is usually made up of one species. Different species of algae become blooms at different times in the year and under different conditions.

There are many types of bloom-forming marine algae.

The type - and how many there are - are influenced by sunlight, temperature and the level of nutrients in the water.

Bloom-forming algal populations start to increase in the spring, responding to rising temperatures and the length of the day. They grow rapidly into the summer.

## Are marine algal blooms harmful?

Most marine algal blooms are harmless and adverse effects are rare.

Blooms of non-toxic algal species are more common than toxic ones.

These are the common ones in Welsh waters and are harmless:

*Noctiluca scintillans* - which causes an orange discolouration of the water.

*Phaeocystis pouchetii* - one of the most common bloom-forming algae in British coastal waters. The blooms form a brown, frothy scum.

Strong winds can whip up these algae into foam, which can be up to two meters thick on the surface of the water. It is then often swept ashore where it breaks down into an unpleasant brown slime, smelling a bit like sewage.

Non-toxic blooms are mainly just a nuisance.

However, some algal blooms can affect fish and other marine life by producing toxins which can have, if swallowed, an adverse effect on people.

Here's some examples:

*Gyrodinium aureolum* - has been linked with shellfish and fish mortalities, particularly in marine fish farms. This species also causes the water to appear red in colour, sometimes referred to as red tide.

*Chaetoceros* - have spines which can clog up and damage fish gills, leading to the death of cage-reared salmon and other species.

*Alexandrium and Dinophysis* - can contaminate shellfish, which can then be poisonous for fish, birds and people.



There are controls in place to protect people from the health risk of eating contaminated shellfish.

The Centre for the Environment, Fisheries and Aquaculture Science (CEFAS) monitors commercial fisheries for signs of contamination. Where necessary, they will take steps to stop shellfish becoming available for people to eat.

Decaying algal blooms can also affect marine species by reducing the amount of oxygen in the water. If there's been a big build-up of algae in shallow water, it can kill fish and other species such as lugworms and sea urchins.

## **What is NRW doing?**

We work with others to protect the environment and everyone's enjoyment of our natural heritage.

This includes monitoring coastal bathing waters between May and September to check its quality. We use this information to advise the public.

## **What can you do?**

Call us to report environmental incidents on our hotline 03000 65 3000 (24 hours)

Find out more about us:[Enquiries@naturalresourceswales.gov.uk](mailto:Enquiries@naturalresourceswales.gov.uk)

Or visit our website [www.naturalresources.wales](http://www.naturalresources.wales)

