PFAS Fact File

What are PFAS?

Harmful chemicals are polluting the planet, wildlife and people. PFAS, or per-fluoroalkyl and poly-fluoroalkyl substances, are just one group of ocean poisons. But what are they and what can we do to stop them?

Better known as 'forever chemicals, PFAS are a group of thousands of individual, but similar, chemicals. They're used in countless products and manufacturing processes. They have the following factors in common:

- Made up of a Carbon-Carbon backbone
- Strong, persistent Carbon-Fluorine bonds
- They don't react with air, water or grease, are flame retardant, and can withstand high temperatures
- Water soluble

How do they reach the sea?

Forever chemicals are now deeply embedded in modern manufacturing.

They're often used by default and can be found in everyday items like clothing, food packaging, vehicles, electronics and even in the industrial processes that produce them. Therefore, any waste or excessive runoff from these industries can enter our waterways and start the journey towards the ocean

Our water treatment systems currently don't remove PFAS from wastewater or sewage, and they've been found everywhere from the North to South Pole.

FloridaStock/Shutterstock

The problem

These chemicals are **persistent**. They have staying power, meaning that they don't ever disappear and build up in the environment over time.

Because they dissolve in water, they're **mobile**. This means they can travel easily through the environment, enter food chains and pass from animals to their young.

Their widespread use around the world, and their resistance to water, grease, heat and other chemicals, means they're becoming a **global problem**.

Forever chemicals have been found in **all water** across the world, including rainwater and ocean spray

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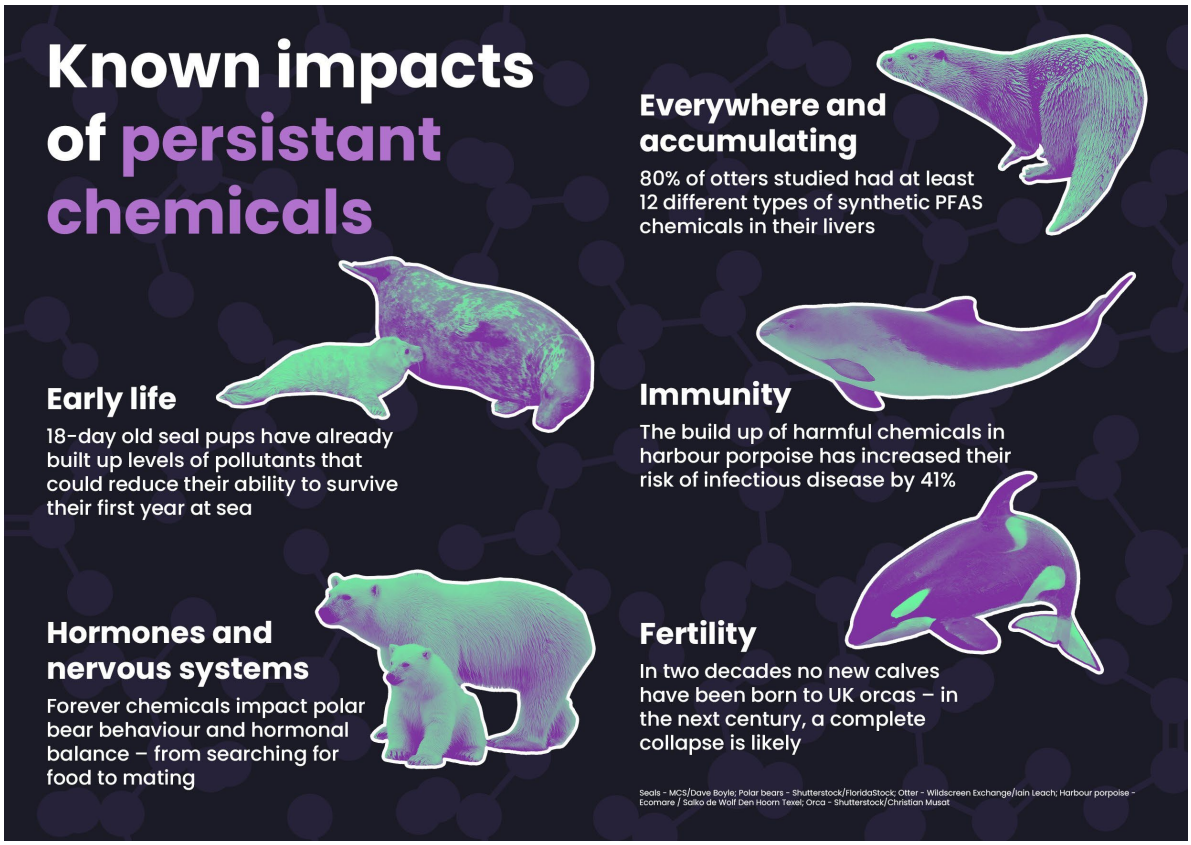
Impacts on marine life

There are now proven links between harmful chemicals and the health of animals. These include damage to their nervous systems, immunity and their ability to reproduce, alongside reducing their resilience to other stressors such as climate change and disease.

This is just the tip of the iceberg, with more studies on the long-term effects of chemical pollution published regularly. Research is showing the frightening real-world consequences of inaction on chemical pollution on our blue planet.



Interactive map

A map of UK PFAS pollution in wildlife was published by Watershed Investigations, the Marine Conservation Society and the Guardian, identifying official data on more than 1,000 animals to reveal widespread contamination. This illustrates the scale and severity of the problem, underscoring the desperate need for action.

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Take action

The only option to prevent forever chemical pollution in the environment is to stop them at source.

We can't completely avoid forever chemicals in the products we purchase. Discerning which products contain forever chemicals and sourcing suitable alternatives would be incredibly difficult.

Through urgent and ambitious action, legislation can and will limit and regulate the use of chemicals to ultimately protect people and planet. The European Union has committed to phasing out all PFAS forever chemicals from all non-essential uses. The UK must align with this commitment, providing us with the same protection.

Non-stick frying pan
Pixabay

Chemical testing
Julia Koblitz/Unsplash

We must act now

We urgently need to move towards a PFAS-free economy by stopping PFAS forever chemicals at source. We want to see all PFAS banned from all uses where there are alternatives, including things like firefighting foams and consumer uses.

Help us demand the changes that will stop forever chemicals reaching the sea.

- You could design a creative campaign to share what you've learned about forever chemicals – check out our templates for inspiration or write a persuasive letter to your local government representative!
- If you want to do more, we need your help to spread the word in your communities. Talk to your friends, family and colleagues about forever chemicals!

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