CHEMTrust

Protecting humans and wildlife
from harmful chemicals

PFAS: From Source to Solution

Dr. Shubhi Sharma

Scientific Researcher

CHEM Trust

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WHO ARE CHEM Trust?

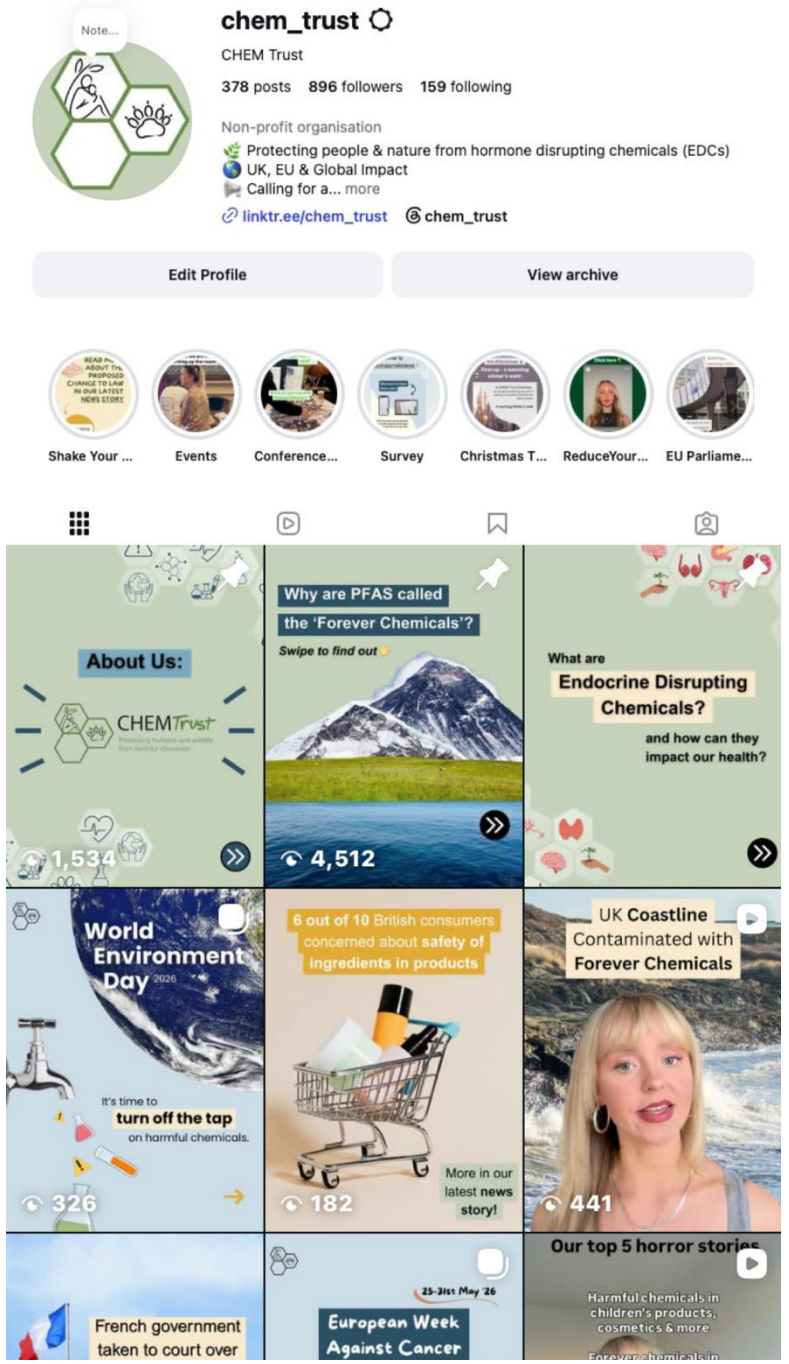
- Environmental and health charity working at UK, EU & global levels to protect humans & wildlife from harmful chemicals
- Working with scientists, technical processes and decision makers, in partnership with other NGOs

Website: chemtrust.org

LinkedIn: CHEM Trust

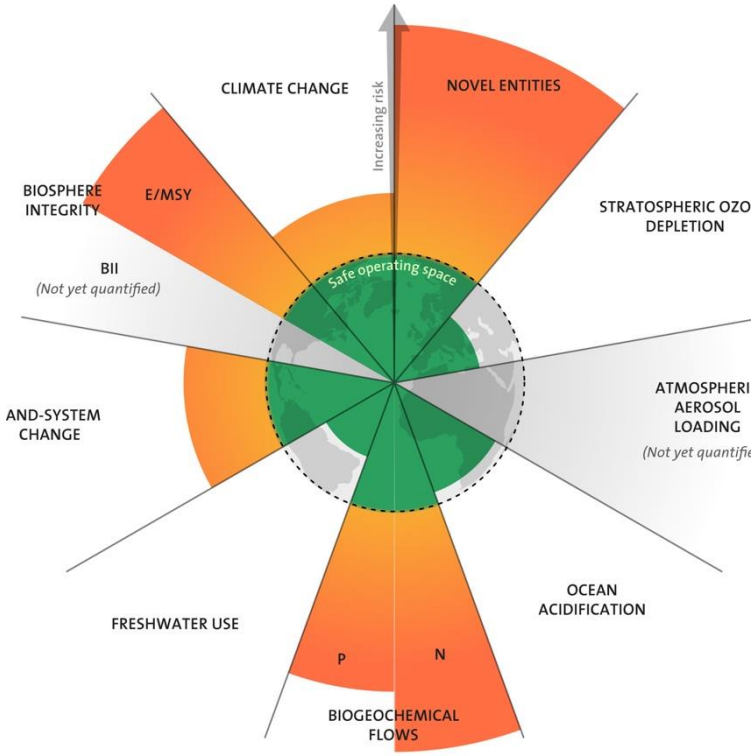
Bluesky: @chemtrust.bsky.social

Instagram: @chem_trust



WHAT ARE PFAS AND WHY ARE THEY A PROBLEM

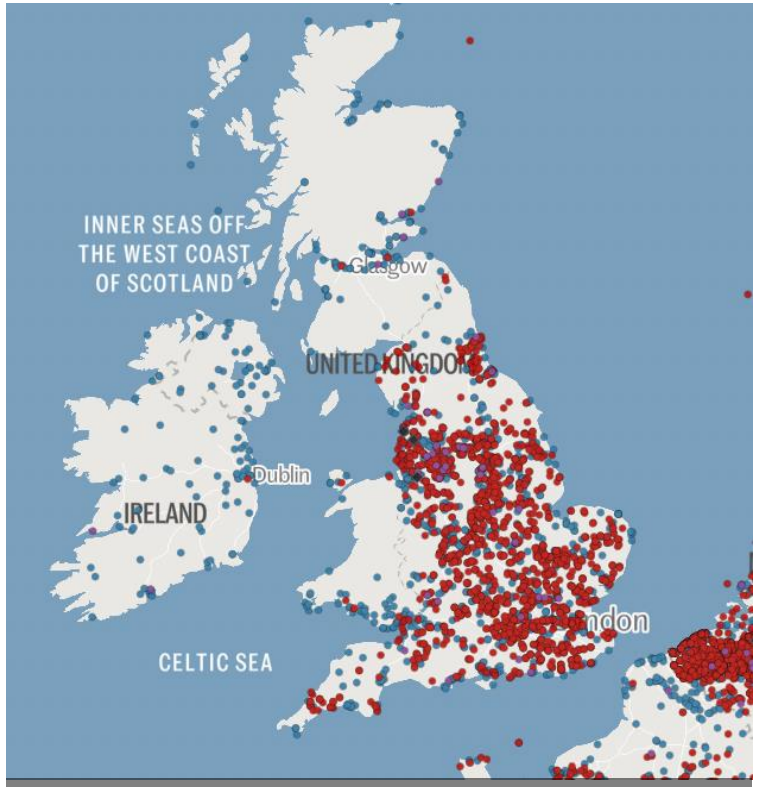
- PFAS are a group of about 10,000 synthetic chemicals
- The C-F bond is one of the strongest chemical bonds in organic chemistry, making PFAS durable, water-, oil- and heat-resistant and extremely persistent.
- Wide-ranging uses like textiles, electronics, cosmetics, cookware, coolants etc.
- Many PFAS are also bioaccumulative, i.e., build up in bodies.
- PFOA and PFOS have been linked with diseases such as certain types of cancer, adverse impacts on the immune/reproductive system, etc.
- Fluoropolymers are associated with substantial PFAS emissions.
- Scientists have argued that the planetary boundary for PFAS has been exceeded.



Azote for Stockholm Resilience Centre, based on analysis in Richardson et al 2023

EXTENT OF PFAS POLLUTION IN THE UK

- Over 10,000 PFAS contamination sites in the UK, according to an Environment Agency report.
- Bentham, North Yorkshire, has the highest known concentration of PFAS in the entire UK. PFOS levels 55,538 times higher than the Environment Quality Standard.
- Some Jersey island residents' blood is so polluted that they are being offered bloodletting.
- Blackpool, Lancashire, has massive PFAS contamination due to a chemical plant. High PFOA levels.



Lemonde, PFAS pollution map, 2023

EXTENT OF PFAS POLLUTION IN THE UK

- Otters, harbour porpoise, and seabird species have been found to be contaminated with PFAS.
- Drinking water sources and food products such as strawberries and spinach are also contaminated with PFAS.
- Every single river in England fails to meet the new chemical standards largely due to PFAS.

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PFAS REGULATIONS: EU vs UK

The UK is falling behind the EU on regulating ‘forever’ chemicals: can the new government put this toxic legacy right?

September 12, 2024 By **Shubhi Sharma**

INTERNATIONAL BANS

- **PFOS, its salts and PFOSF:** in 2009
- **PFOA and related substances:** in 2020
- **PFHxS and related substances:** in 2023
- **(C_9 – C_{21}) PFCAs, their salts and related compounds:** The Stockholm Convention's Persistent Organic Pollutants Review Committee has been evaluating long-chain PFCAs for addition to the Convention.

GROUP BANS

EU	UK
TDFAs: in 2021	**TDFAs:** banned before Brexit, but no PFAS sub-groups have been banned in the UK since it left the EU.
C9-C14 PFCA and related substances: in 2023	**Firefighting foam restriction:** HSE has proposed a restriction closely matching the EU restriction. Discussions ongoing.
PFHxA: covers consumer textiles, food packaging, consumer mixtures, cosmetics, and some firefighting foam applications. Adopted in 2024.	
Universal PFAS restriction: restricts the import, manufacture and use of over 10,000 PFAS in various sectors. Ongoing.	
Firefighting foams: full group-based restriction for PFAS, with derogations for certain uses. Adopted in 2025	

DRINKING WATER REGULATIONS

EU	UK
• ‘Sum of PFAS’ = 0.1 µg/L for a group of 20[1] PFAS. • ‘PFAS total’ = 0.5 µg/L. • Came into effect in January 2026. [1]PFBA, PFPA, PFHxA, PFHpA, PFOA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFBS, PFPS, PFHxS, PFHpS, PFOS, PFNS, PFDS, Perfluoroundecane sulfonic acid, Perfluorododecane sulfonic acid, Perfluorotridecane sulfonic acid	England and Wales have guidance (non-binding) on PFAS in water - a 'wholesomeness' guideline value of 0.1 ug/l for 48 PFAS is listed in the Drinking Water Inspectorate's guidance to water companies. No statutory drinking water limits for PFAS in England and Wales. Scotland adheres to the EU guidelines. The government have committed to consult on statutory guidance on drinking water.

SURFACE & GROUND WATER, BIOTA REGULATIONS

EU	UK
24[2] PFAS to not exceed 4.4 ng per litre of surface and groundwater.	The Environment Agency monitors some PFAS in surface and groundwater, but there are no statutory limits.
24[2] PFAS to not exceed 0.077 µg/kg wet weight in biota (plants and animals in any region).	The Environment Agency tests for PFOS and PFOA (the two most widely detected PFAS chemicals) in freshwater wildlife.
Member States will have to transpose the directive into national law by 21 December 2027. Member States have until 2039, with the possibility to delay until 2045, to comply with the new standards. [1]PFOA, PFOS, PFHxS, PFNA, PFBS, PFHxA, PFBA, PFPeA, PFPeS, PFDA, PFUnA, PFDoDA, PFHpA, PFTrDA, PFHPS, PFDS, PFTeDA, PFHxDA, PFODA, Gen-X, ADONA, 6:2 FTOH, 8:2 FTOH, Acetic Acid	PFOS is a Priority Hazardous Substance under the UK Water Framework Directive, and the Environmental Quality Standard (EQS) for biota is set at 9.1 µg/kg (wet weight).
	No Environmental Safety Standard set for PFOA in biota under current UK legislation.

FOOD AND FOOD PACKAGING REGULATIONS

EU	UK
EFSA guideline established in 2020: Tolerable Weekly Intake (TWI) of the sum of PFOA, PFOS, PFNA and PFHxS to not exceed 4.4 ng/kg body.	Food packaging is meant to be covered under the UK-EU SPS deal, but it is currently unclear whether the Packaging and Packaging Waste Regulation is included, which bans the use of PFAS.
EU COM adopted the Packaging and Packaging Waste Regulation (PPWR) in January 2025.	
PPWR introduces a ban on the intentional use of PFAS in food packaging.	
Entered into force in February 2025, with an 18-month transition period.	

WASTE REGULATIONS

EU	UK
• Adopted in 2022. • Limit value of 0.1 mg/kg for PFOA and PFHxS and 20 mg/kg for their related substances • A limit value of 50 mg/kg for PFOA and PFOS and 2000 mg/kg for their related substances. • The universal PFAS regulation will also restrict a wide range of PFAS from being used which means that there will be less PFAS at the waste stage.	A new statutory instrument has been adopted, taking forward changes to the UK's regulation of POPs in waste, matching those of the EU's.

UK PFAS ACTION PLAN AND ENVIRONMENTAL AUDIT COMMITTEE RECOMMENDATIONS

- Action plan
- Monitoring instead of prevention at the source
- Unclear commitment to align with the EU's protective PFAS ban
- Lack of binding phase-out timelines
- Polluters still not paying
- Giving responsibility to the consumer

- EAC criticises the plan for not going far enough and suggests:
- implementing Extended Producer Responsibility,
- alignment with the EU
- implementing a group ban on PFAS

THANK YOU

ANY QUESTIONS?

Website: chemtrust.org
LinkedIn: CHEM Trust
Bluesky: @chemtrust.bsky.social
Instagram: @chem_trust