

Letter to UK Ministers from PFAS Experts on need for Regulation

To:

Rt Hon Steve Reed OBE MP, Secretary of State for Environment, Food and Rural Affairs
Emma Hardy MP, Parliamentary Under-Secretary for Environment, Food and Rural Affairs

Rt Hon Jonathan Reynolds MP, Secretary of State for Business and Trade and President of the Board of Trade
Rt Hon Liz Kendall MP, Secretary of State for Work and Pensions

Dear Ministers,

Congratulations on your new appointments. We wish you every success in your new roles.

We are writing to you as scientific experts in PFAS, specialists in epidemiology, toxicology and environmental chemistry, across the UK, as well as overseas. We urge you to adopt a more ambitious approach to the regulation of the chemicals per- and polyfluoroalkyl substances (PFAS) than the previous government. We recommend the UK matches the EU's universal PFAS restriction which takes a broad grouping approach to PFAS based on their extreme persistence and ubiquitous presence in the environment, combined with other hazardous properties that trigger additional concerns.

The severity of the situation

PFAS are a group of more than ten thousand chemicals with a wide range of industrial and consumer uses. PFAS are highly persistent chemicals. Once in the environment, there is no evidence that they degrade, hence their nickname 'the forever chemicals'. Scientific evidence shows that PFAS have contaminated every corner of the globe, from ice sheets in the Arctic¹ to Mount Everest². In the UK, PFAS have been detected in the blood^{3,4} of people, in drinking water⁵, in animals such as fish⁶ and otters⁷ and in a wide variety of supermarket food items⁸. A recent report for the Environment Agency identified up to 10,000 "high risk sites" of contamination by PFAS across the UK, with an estimated £121 billion of remediation costs, which underscores the importance of avoiding the addition of further sources of contamination⁹. Some well-studied PFAS have been proven to be toxic to humans and wildlife. Even if all production and emissions of PFAS stopped tomorrow, these chemicals would still persist in the environment for generations to come.

Regulating all PFAS as one group is the only way to tackle PFAS pollution.

The UK's PFAS Regulatory Management Option Analysis (RMOA)¹⁰, published in 2023, adopts a narrow definition of PFAS, with only a few hundred substances in the scope of this grouping, excluding thousands of PFAS. Narrow grouping approaches are not much of an improvement on individual 'chemical by chemical' analyses as they are slow to regulate and have historically led to the substitution of regulated harmful substances with other, similarly problematic, unregulated

chemicals, whilst also placing a vast burden on the regulator¹¹ The RMOA has created a loophole for this regrettable substitution. Regulating just a few hundred PFAS will not tackle the scale of pollution we face from these chemicals, especially as new PFAS continue to be invented. The EU PFAS restriction, on the other hand, uses the OECD definition of PFAS¹² and covers over 10,000 PFAS. Additionally, the EU takes a broad grouping approach to PFAS based on their extreme persistence¹³ and ubiquitous presence in the environment, combined with other hazardous properties that trigger additional concerns. This is the most pragmatic approach because emissions of persistent chemicals such as PFAS lead to ever increasing concentrations in people and the environment, causing long term exposure and increasing the likelihood of triggering adverse health effects. The UK needs to match the EU's approach on regulating PFAS.

Also, of concern in the UK's RMOA is the exclusion of some fluoropolymers which are a type of polymeric PFAS. They have been left out of the scope of restriction based on the argument that they have 'low reactivity and toxicity'. However, independent peer-reviewed scientific literature shows that their production, use and end of life are associated with emissions of non-polymer PFAS which pose an unacceptable risk to human health and the environment¹⁴. A recent report by the UK Environment Agency has shown that an average of 738 kg per year of a PFAS which is toxic to reproduction called EEA-NH4 is emitted into the River Wyre from a fluoropolymer plant in Lancashire, England¹⁵. EEA-NH4 is an alternative to the banned PFAS perfluorooctanoic acid (PFOA) and is used to manufacture fluoropolymers.

A more precautionary approach to human health is needed

The RMOA concludes that it is not possible to reach a definitive conclusion on the environmental or human- health hazards for most of the PFAS groups because of a lack of scientific evidence. It also says that "although carcinogenicity has been raised as a concern for PFAS, no substance has been established as a human carcinogen" (p.8). On the contrary, the WHO International Agency of Research on Cancer (IARC) has established that PFOA is "carcinogenic to humans" (Group 1), with particular concern on kidney and testicular cancers¹⁶. In addition to toxicological evidence of harm from PFAS, there is also clear epidemiological evidence for a number of other worrying human health effects including reduced vaccination efficiency in children¹⁷, increased cholesterol¹⁸ and reduced duration of breastfeeding¹⁹. We encourage the UK to monitor and incorporate this epidemiological evidence in its approach as well. Moreover, acting on evidence of harm, even where there are uncertainties (following the precautionary principle²⁰), is hugely important, and needs to be the guiding legislative action on PFAS in the UK. For PFAS much of the epidemiological data is on a few specific compounds with many similar substances having no data yet. Assuming that the lack of evidence of harm means that harm does not exist is a logical fallacy because it incorrectly equates the absence of evidence with evidence of absence, ignoring the possibility that harm may simply not have been detected yet. Each day of delay in regulating PFAS adds more to the irreversible PFAS pollution problem.

Alternatives to PFAS are up and coming

An ambitious restriction on PFAS is feasible without adverse socio-economic consequences. For most sectors that use PFAS, there are already viable alternatives²¹. In the past, restrictions have strongly incentivised innovation and encouraged companies to find alternatives²². A PFAS ban would open great market potentials for PFAS alternative suppliers and reward companies that have already invested in alternative technologies. The Government needs to stimulate further development of PFAS alternatives through regulation, driving the market towards safer alternatives.

For Labour to achieve its ambition of meeting the environmental targets set out under the 2021 Environment Act, tackling PFAS pollution is a priority. Therefore, as scientists who study PFAS, we urge the government to take a more ambitious approach to regulating PFAS than the previous government and follow the science that indicates a broad grouping approach based on persistence is the most effective solution to controlling PFAS pollution.

We look forward to hearing from you.

Yours sincerely,

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