12 Key Asks for the UK Chemicals Strategy

The UK Chemicals Strategy must provide strong, effective protection for UK citizens, wildlife and the environment from harmful chemicals. To ensure this level of protection, the strategy must:

1. **Prioritise prevention and precaution**
   Future pollution of humans, wildlife and the environment with harmful chemicals must be prevented. Any gaps in scientific knowledge should be acknowledged; absence of evidence does not equate to evidence of absence of harm, and we must therefore be precautionary to all that we don't know.

   The UK Chemicals Strategy must therefore apply the precautionary principle. This is particularly important in consideration of sensitive development windows (e.g., in the womb, early childhood). Such an approach would be in line with the recommendations made by the Environmental Audit Committee in 2019 [1].

2. **Phase out the most hazardous chemicals from consumer products for all non-essential uses**
   A generic approach to risk management must be adopted, to ensure that chemicals that are carcinogenic, mutagenic and reprotoxic (CMRs); endocrine disruptors (EDCs); immunotoxic; neurotoxic; toxic to a specific organ; or are persistent and bioaccumulative and toxic (PBTs) or persistent and mobile and toxic (PMTs) are not present in consumer products. In particular, this includes: food contact materials, cosmetics, textiles, childcare products and children's toys, bedding and furniture, vehicles, building products and electronics.

   To achieve this, the UK Chemicals Strategy must set out a clear timetable for banning the above-mentioned chemicals as a group (see key ask 5) in all non-essential uses for the health, safety and/or the functioning of society. For those uses that are deemed essential, and where no suitable replacement exists, there should be strategic investment to drive innovation of safe alternatives.

3. **Protect UK citizens and the environment from endocrine disrupting chemicals (EDCs)**
   The harmful impact that EDCs have on human health, wildlife and the environment has been known for more than 20 years. They are now ubiquitous in the general population and in the environment [2][3].

   The UK Chemicals Strategy must include a plan to address EDCs, including criteria to systematically identify EDCs and suspected EDCs, as well as specific measures and timelines to minimise and phase out exposure. This should involve a ban on EDCs and suspected EDCs in consumer products, as highlighted in key ask 2. EDCs must be considered non-threshold substances.

4. Phase out the use of PFAS and other very persistent chemicals

Scientists have argued for decades that high persistence in itself is a major concern [4]. Very persistent chemicals accumulate in the global environment and have the potential to reach critical concentrations at which negative unexpected effects can be triggered. Because remediation is ineffective once they have spread into the environment, contamination from very persistent chemicals will take generations to reverse after emissions, putting future generations of people and wildlife at risk. Very persistent chemicals are also of particular concern in the context of developing a safe and sustainable circular economy, as they may accumulate in recycled material.

Per- and polyfluorinated alkyl substances (PFAS) for instance, are a family of over 4,500 substances, all of which are very persistent [5]. They are found in a wide range of uses in the UK, including high-turnover products such as food packaging, which represent a continual, and potentially growing source of pollution. Other groups of very persistent chemicals are of concern, in particular other halogenated chemicals, with bromine or chlorine.

The UK Chemicals Strategy must therefore develop a plan with a clear timetable to phase out all very persistent chemicals, including the whole PFAS family and other halogenated chemicals, to prevent further build-up of these chemicals in the environment and ensure the protection of human health, wildlife and the environment.

5. Speed up regulation of harmful chemicals and avoid regrettable substitution by adopting a grouping approach

Regulating substances one-by-one (or in too narrow groups) can lead to regrettable substitutions. For example, bisphenol A (banned in thermal paper in the EU from January 2020) has been widely substituted in till receipts with bisphenol S [6], which is now under assessment for endocrine disrupting properties. CHEM Trust predicted this example of regrettable substitution in their 2018 report Toxic Soup [7].

Regulating individual substances delays health and environmental protections. For example, at the current rate, regulating all PFAS substances individually would take thousands of years. Regrettable substitutions also place a financial burden on chemical users within the supply chain. Manufacturers and retailers are investing both time and money in switching to alternative chemicals, which may themselves become restricted at a later date.

To improve regulatory efficiency, avoid regrettable substitution and avoid delayed protection of human health and the environment, the UK Chemicals Strategy must establish a plan and clear timeline for implementing a default approach of assessing and regulating substances in groups. Key chemicals to be addressed as groups include PFAS, the bisphenols, phthalates and flame retardants.

6. Address the 'cocktail effect'

UK citizens are exposed to hundreds of chemicals from multiple sources, including food, consumer products, air pollutants, household dust and drinking water [8]. Similarly, our environment, in particular freshwater and marine systems, are pathways and sinks for the multitude of chemical contaminants used in everyday life [9]. Scientific research has shown that mixtures are a real-world issue [10], with mixtures of chemicals creating combination effects, or the 'cocktail effect', even if each individual chemical is present at levels below what is known to cause a negative effect.

The UK Chemicals Strategy must therefore set out plans with clear timelines for developing legislation that addresses combined exposure to chemicals, including implementing a mixture assessment factor (MAF) in risk assessments.

7. Maintain and expand on workers' health and safety

REACH and associated European workers health and safety rights and directives [11] complemented and had a positive impact on the workplace and the health of workers and the environment. The UK should aim to retain and build on existing health and safety regulations and all regulations related to chemical safety in the workplace.

Current regulations do not go far enough to safeguard the reproductive capacity of women and men. There is also a lack of sex and gender disaggregated data, which means that legislation fails to account for the fact that women are disproportionately affected by exposure to chemicals [12].

A more sex and gender-based approach is needed. This approach must support the prevention of occupationally related adverse health impacts, especially in relation to cancer prevention and reproductive health. The UK government should support the initiative to make Health and Safety a fundamental human right [13].

The UK Chemicals Strategy must include a requirement for companies to ensure safe working conditions throughout their supply chain, including in waste and recycling processing. This must include extending workplace legislation on carcinogens and mutagens [14] to include reprotoxic substances. Legislation must also reflect the fact that for many people, the home is also their workplace.

The UK Chemicals Strategy must ensure that chemical exposure assessments use biomarkers [15] such as umbilical cord blood and breast milk taken pre-conception and post-birth to lay down safety standards which protect the most vulnerable, the embryo and the foetus, and so protect all.

8. Ensure a clean circular economy with products that are safe by design

Chemical regulations must play an important role in the UK's movement to a climate-neutral and circular economy. Harmful chemicals can disrupt the circular economy, for example where banned chemicals are present in a product that is to be recycled (e.g., furniture, electronics). Lack of data and poor traceability are holding

back progress. The government has previously said it will develop a National Materials Datahub, to provide "comprehensive data on the availability of raw and secondary materials, including chemicals, across the economy to industry and the public sector", but work on this has unfortunately been paused.

The UK Chemicals Strategy must outline how it will support the development of a circular economy without toxic chemicals. This must include: a National Materials Datahub to ensure traceability for all substances in products and materials (ensuring full transparency); ensuring products are safe by design by phasing out the use of hazardous substances; not creating exemptions for secondary materials.

9. Develop an effective monitoring and alert system

Chemicals in the population and the environment must be monitored to identify chemicals of concern. Current routine monitoring of specific priority substances should be complemented by wide screening methodologies such as non-targeted semi-quantitative analysis to provide an efficient alert system for emerging contaminants. Monitoring programmes on land, in freshwater and in the marine environment must be fully harmonised as they are ultimately all connected.

Certain chemicals or groups of chemicals must instantly trigger the alarm and therefore action, including: EDCs; Carcinogenic, Mutagenic and Reprotoxic (CMRs); Neurotoxic; Immunotoxic; Persistent, Bioaccumulative and Toxic (PBTs); Persistent, Mobile and Toxic (PMTs); very Persistent (vP); very Persistent, very Bioaccumulative (vPvB); and very Persistent, very Mobile (vPvM) chemicals, as well as those listed as substances of very high concern (SVHCs) under REACH.

The UK Chemicals Strategy must set out plans and a clear timeline for developing an effective monitoring and alert system. Transparency in these processes and easy access to information must be ensured.

10. Stop the continued accumulation of legacy chemicals in the environment

Hazardous persistent legacy chemicals banned via the Stockholm Convention (e.g., PCBs, Brominated flame retardants, PFOS and PFOA) are still found in the UK environment and wildlife at levels exceeding environmental standards and toxicity thresholds. Pollution from legacy persistent chemicals is hindering the recovery of freshwater wildlife populations in the UK and killer whale populations in the UK are trending towards a complete collapse within the next 100 years, consistent with severe PCB-induced population-level effects [16].

The UK Chemicals Strategy must set actions and provide a timeline for the identification and elimination of the remaining sources of emissions of these legacy chemicals to stop the accumulation of these persistent chemicals in the environment. It must also address the destruction of the remaining stocks of banned chemicals in a sustainable manner and the remediation of contamination hot spots. Transparency about the stocks, sources of emissions and the location of contamination hot spots must be ensured.

11. **Remain aligned with the world-leading chemical regulation EU REACH**

While not perfect, EU REACH sets the de facto international gold-standard for chemicals regulation. The recently published EU Chemicals Strategy for Sustainability represents a step-change in chemical safety laws and has the potential to set Europe on a new path for better protection from toxic chemicals. Keeping step with EU REACH and chemical related laws as they continue to improve would ensure our environment, wildlife and public health continues to benefit from its relatively high protections from hazardous chemicals.

Any deviations from EU controls should be more protective of public health and/or the environment. It also remains in the interests of our environment, wildlife, public health and British industry for the UK to negotiate a close partnership with the EU and EU REACH on chemical regulation in ongoing post-Brexit trade negotiations.

The UK Chemicals Strategy must commit to meet or exceed EU REACH protections for human health and the environment from hazardous chemicals.

12. **Ensure more transparency and use of all relevant science for assessing health risks**

Methods for evaluating health risks from chemicals have advanced rapidly in the last 5 years. New transparent and systematic methods can help ensure that scientific research is not used selectively when determining health risks posed by a chemical substance. This is fundamental to ensuring chemical regulations are based on a full understanding of the relevant evidence.

The UK Chemicals Strategy must ensure regulation is based on best use of the best evidence, integrating up-to-date assessment methods into the work of national agencies and scientific advisory committees.

CHEMTrust
Protecting humans and wildlife from harmful chemicals

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Prevent the preventable

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HAZARDS CAMPAIGN

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FROM PINK TO PREVENTION

Alliance for Cancer Prevention

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