Amendments to the Persistent Organic Pollutants Regulations

Lead department	Department for Environment, Food & Rural Affairs
Summary of proposal	Amendments to the UK Persistent Organic Pollutants (POPS) Regulations, implementing new restrictions on persistent organic pollutants such as methoxychlor, dechlorane plus (DP), UV-328 and PFOA.
Submission type	Impact assessment (IA) – 11 March 2025
Legislation type	Secondary legislation
Implementation date	1 April 2025
Policy stage	Final
RPC reference	RPC-DEFRA-5367(1)
Opinion type	Formal
Date of issue	9 April 2025

RPC opinion

Rating[1]	**RPC opinion**
Fit for purpose	The IA provides a reasonable assessment of introducing restrictions on three new persistent organic pollutants: UV-328, dechlorane plus (DP) and methoxychlor. It quantifies the main direct impacts to businesses from transitioning to alternatives, such as reformulation, testing and familiarisation costs. While some areas could be strengthened, the IA overall demonstrates that the key costs and benefits have been appropriately considered.

Business impact assessment

	Department assessment	**RPC validated**
Classification	Non-qualifying regulatory provision	Non-qualifying regulatory provision (international)
Equivalent annual net direct cost to business (EANDCB)	£3.7m	£3.7m *2025 prices and PV base year*
Business net present value	-£63m	
Overall net present value	-£63m	

[1] The RPC opinion rating is based only on the robustness of the EANDCB and quality of the SaMBA, as set out in the Better Regulation Framework. RPC ratings are fit for purpose or not fit for purpose.

RPC summary

Category	Quality[2]	RPC comments
EANDCB	**Green**	The IA correctly identifies and quantifies the direct impacts to businesses from banning methoxychlor, dechlorane plus and UV-328 as well as other amendments in line with the updated Stockholm Convention on POPS. It provides a detailed assessment of the costs to formulators and product manufacturers of transitioning to alternatives.
Small and micro business assessment (SaMBA)	**Green**	The IA considers impacts on small and micro businesses that will need to transition away from using certain chemicals. Exemptions for SMBs are not permitted. The IA identifies the main areas SMBs will be affected and quantifies key compliance costs from the chemical restrictions. More detail could be provided on the specific types of impacted SMBs.
Rationale and options	**Weak**	The rationale for further restricting these persistent organic pollutants is well explained. The do nothing and voluntary options are very similar; the Department should consider reformulating these.
Cost-benefit analysis	**Satisfactory**	The business costs of transitioning to alternatives are clearly laid out with explanation of assumptions. The unmonetised benefits of avoided health impacts and remediation costs are discussed qualitatively. Useful switching analysis is provided showing only around 100 human disease incidents need to be avoided, for benefits to outweigh the costs.
Wider impacts	**Weak**	While touching on areas such as competition, innovation and trade, the IA lacks detail on broader implications such as distributional impacts, and costs passed through to consumers.
Monitoring and evaluation plan	**Satisfactory**	The impacts have been reasonably assessed to be below £10m, which is a guideline for the inclusion of a review clause. The IA does discuss reporting requirements under the Stockholm Convention, and existing research evaluation programmes.

[2] The RPC quality ratings are used to indicate the quality and robustness of the evidence used to support different analytical areas. The definitions of the RPC quality ratings can be accessed here.

Summary of proposal

This proposal covers amendments to the UK Persistent Organic Pollutants (POPs) Regulations to implement recent changes adopted under the Stockholm Convention on POPs. Key amendments include:

- Listing three new substances (UV-328, dechlorane plus [associated with the largest costs], methoxychlor) as prohibited POPs, with specific exemptions allowed for certain continued uses of UV-328 and dechlorane plus.
- Adding unintentional trace contamination (UTC) limits for the three newly listed POPs, as well as for two existing POPs (pentachlorophenol and hexachlorobenzene).
- Amending existing UTC limits and exemptions for the POP perfluorooctanoic acid (PFOA).
- Introducing new waste concentration limits that will trigger additional waste disposal requirements for four POPs (PFOA, perfluorohexane sulfonic acid, dicofol, and pentachlorophenol).
- Lowering the existing waste concentration limit for a group of brominated flame-retardant POPs.
- Adding new entries to annexes covering hazardous waste landfill limits and waste codes.

The aim is to restrict production, use and improper disposal of these persistent organic pollutants, which can harm human health and the environment. The amendments involve transitioning away from using these substances, by introducing prohibitions along with time-limited exemptions to allow businesses to switch to safer alternatives.

EANDCB

The IA has identified and quantified the direct impacts of the policies considered in line with guidance. The EANDCB includes in cost order:

- Reformulation and testing costs for businesses transitioning away from DP and UV-328 (£32m)
- Familiarisation costs for businesses to understand the regulations (£23m)
- Ongoing costs to businesses from using more expensive UV-328 alternatives (£6m)
- Costs to PFOA firefighting foam stockpile holders to divert waste foams to high temperature incineration (£0.5m)
- Haulage costs to transport PFOA firefighting foams to high temperature incinerators (£0.1m)

This totals -£63m Business Net Present Value, with an EANDCB of £3.7m. The EANDCB appears to be estimated correctly. Sensitivity analysis is provided to account for uncertainties in the input data. The appraisal period starts in 2020 as the Department expect costs were incurred in anticipation of Stockholm Convention decisions to list new POPs. The transition to alternatives can involve a multi-phase process spanning years. The appraisal period ends in 2044, when the last exemptions expire.

The IA explains the assumptions and methodology clearly for calculating these impacts. The estimates are supported by evidence from detailed stakeholder engagement, such as with trade associations, technical studies, and published sources where available.

SaMBA

The aim of the restrictions is to mitigate risks associated with persistent organic pollutants, which affect all businesses irrespective of their size. The IA identifies that SMBs are likely to be impacted across several sectors including chemical formulators, manufacturers of products containing the restricted chemicals, and waste management companies handling stockpiles of products being disposed of. Exemptions for SMBs are not available.

The difficulties in obtaining precise counts of SMBs complicates the assessment. The IA makes a reasonable effort to size the potential SMB populations impacted based on business statistics. This includes firms involved in manufacturing, importing, and selling products that need to transition away from UV-328. ONS data is provided showing the breakdown of SMBs vs larger firms across relevant manufacturing sectors.

The IA quantifies the expected familiarisation costs of £31 per SMB to understand the regulations. The IA could provide more detail distinguishing impacts between micro businesses and larger SMBs. However, the lack of precise SMB counts reflects the difficulties in obtaining this granular data from stakeholders. The UK has taken advantage of the exemptions available under the Stockholm Convention, including lead-in times and gradual adjustment.

Rationale and options

Rationale

The IA provides a satisfactory rationale for further restricting persistent organic pollutants such as methoxychlor, dechlorane plus, UV-328 and PFOA. The IA frames the policy objectives around restricting production, use and waste management of newly listed POPs. The policy is driven by significant environmental concerns. Persistent organic pollutants are known for their ability to resist natural degradation, leading to long-term accumulation in the ecosystem. These substances pose serious risks to wildlife and can contaminate water sources, soil, and air. By reducing the production and use of these pollutants, the UK aims to protect biodiversity and ensure cleaner, safer natural habitats.

Options

1) Do nothing - make no amendments to existing regulations

2) **Amend the POPS regulations** to restrict and phase-out methoxychlor, dechlorane plus, UV-328 and PFOA in line with Convention requirements **(Preferred option)**

3) Voluntary compliance – industry voluntarily eliminates UV-328, DP and methoxoychlor from manufacture and use in GB.

The do nothing and voluntary options are very similar, both involve taking no mandatory action. The voluntary option relies on businesses choosing to act on their own initiative without any compulsory measures being imposed. The Department should consider reformulating the options, or explaining more clearly how they differ.

The IA could discuss international approaches such as exemptions, longer / shorter transitional periods, or substance-specific risk management evaluations allowed under the Stockholm Convention.

Cost-benefit analysis

The do nothing scenario provides the necessary baseline to assess the costs and benefits of amending the regulations as proposed.

On costs, the IA clearly lays out and quantifies the main direct impacts to businesses. The methodology, assumptions and data sources used to estimate each of these cost elements are explained transparently. The IA draws on evidence from literature reviews, stakeholder engagement, and technical reports where available. Sensitivity analysis is provided to account for uncertainties in areas such as the cost of alternative chemicals.

On benefits, the IA discusses the avoided health impacts and environmental damage from reducing emissions of these hazardous pollutants in qualitative terms. While not monetising these benefits, it summarises areas such as reduced medical costs, productivity losses and remediation expenditures that could be quantified with better data. The lack of monetised benefits is a limitation, but a reasonable effort is made to qualitatively describe the expected advantages based on the available evidence. Estimating the scale of potential unmonetised benefits would strengthen the IA.

The switching cost analysis estimates the number of avoided disease cases needed to offset the business costs estimated. Specifically, it estimates around 80-120 avoided cases of chronic kidney disease, infertility, low birthweight, or cancer would need to occur for the health benefits to equal the £68m in business costs between 2020-2044. The IA transparently lays out the disease cost estimates, sources and acknowledges the uncertainty around linking chemical exposure to disease incidence. It only includes a subset of relevant health impacts (e.g. it excludes endocrine disruption), and does not fully capture welfare impacts, but demonstrates that a small number of avoided health cases justifies the regulatory cost.

Wider impacts

Competition

The IA acknowledges that as businesses transition to alternatives, increased costs could potentially be passed down to UK importers and downstream users, affecting pricing structures and profit margins. However, evidence is not provided on the likely scale or distribution of these impacts across different sectors and firm sizes. The IA could assess whether the restrictions may create unlevel playing fields. It could consider impacts on competition between firms already using alternatives versus those needing to transition.

Innovation

The IA suggests the restrictions could spur innovation in developing safer alternative chemicals and formulations, particularly citing the potential for cost efficiencies over time compared to DP and UV-328. The broader impacts on innovation activities, R&D spending, and the development of new products and production processes by affected firms could be discussed, including possible impacts on domestic versus international firms.

Trade

The IA notes that without the amendments, this could disrupt trade flows for key sectors such as aerospace, medical technology and automotive products. This is because products lawfully containing these chemicals, that were manufactured and placed on the market in other countries, would have been prohibited for import, use and manufacture in the UK. The IA states this regulatory divergence from trade partners would negatively impact UK industry, manufacturing, and consumers relying on imported components and finished goods containing these restricted substances.

However, as the amendments align with international standards, the assessment concludes they will have a negligible trade impact, including with nations not parties to the Stockholm Convention.

Monitoring and evaluation plan

The impacts have been reasonably assessed to be below £10m, which is the typical threshold for the inclusion of a statutory review clause.

The IA discusses the existing monitoring and reporting requirements under the Stockholm Convention and POPS Regulation that the UK must adhere to. This includes submitting national implementation plans and periodic reports on production, use, and stockpile levels of regulated POPs. The IA notes that the Environment Agency will also continue monitoring releases of these substances through environmental monitoring programmes.

The Department says that, at this stage, it is not feasible to set key performance indicators or targets for impacts. It should explain this and how the POPs Multi-Media Emissions Inventory research programme could support evaluation, such as:

- Key evaluation questions to be explored
- Specific data sources or metrics that will be used
- Evaluation timeframe and approach
- Governance arrangements for an evaluation

This could focus on assessing outturn impacts to businesses, effectiveness of restricting targeted substances, and other areas, to determine if the policy achieved its intended outcomes in a proportionate way.

Regulatory Policy Committee

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