

# IPEN GUIDE TO NEW POPs AND THE PFOS EVALUATION

March 2019





# INTRODUCTION

The Stockholm Convention is a living treaty that recognizes the need to take global action on chemicals that are a source of concern because of their persistence, bioaccumulation, long-range environmental transport, and toxicity. The Convention established a science-based process for evaluating candidate POPs that recognizes that lack of full scientific certainty shall

not prevent a candidate substance from proceeding in the evaluation or listing.

For consideration at COP9, the treaty's expert committee, the POPs Review Committee (POPRC), has recommended two substances for listing: dicofol and perfluorooctanoic acid (PFOA), its salts, and PFOA-related compounds. The POPRC has also recommended strengthening the

listing of PFOS in the treaty. Finally, one Party has proposed changing the process for evaluating candidate substances.

When delegates discuss adding substances to the Convention, some may question the need for listing and others may even try to weaken the treaty by creating exemptions to continue uses that benefit certain industries even though viable alternatives are in current use. However, the Convention clearly mandates Parties to decide on listing “*in a precautionary manner.*” This means prioritizing the Convention’s promise to protect human health and the environment from POPs. This same promise also applies to evaluating the listing of PFOS to eliminate various acceptable purposes and specific exemptions. Experts of the POPRC have determined that dicofol and PFOA are, as a result of long-range

environmental transport, likely to lead to significant adverse effects on human health and the environment such that global action is warranted. Both should be listed in the Stockholm Convention for global elimination.



# IPEN RECOMMENDATIONS

<b>Issue</b>	<b>Recommendation</b>
Dicofol listing	Dicofol should be listed in Annex A with no specific exemptions.
PFOA listing	PFOA should be listed in Annex A with no specific exemptions. If any exemptions are granted, they should be time-limited to five years, allowed only for specific uses or products for which there is rigorous and independent evidence of the need for each specific exemption, and the listing should require labeling new products that contain PFOA so that Parties can fulfill requirements under Article 6 as done previously for HBCD (SC-6/13). In addition, due to the costly, highly polluting nature of PFAS-containing firefighting foams and the availability of effective fluorine-free foams, no exemption should be granted. If a specific exemption is allowed for this use, the POPRC recommendations on firefighting foams should be adopted.
Amendment of evaluation	The proposals would weaken the scientific basis for evaluation and should be rejected.

---

Issue	Recommendation
PFOS evaluation	<p data-bbox="323 205 1366 702">Specific exemptions or acceptable purposes for the following 12 uses of PFOS should be ended: photo-imaging, photo-resist and anti-reflective coatings for semiconductors; etching agent for compound semiconductors and ceramic filters; aviation hydraulic fluid; certain medical devices; firefighting foams, photo masks in semiconductor and LCD industries; hard metal plating; decorative metal plating; electric and electronic parts for some color printers and color copy machines; insecticides for control of red imported fire ants and termites; and chemically-driven oil production. If a specific exemption is allowed for use in firefighting foams, the POPRC recommendations should be adopted.</p> <p data-bbox="323 712 1366 954">The following two acceptable purposes should be converted into specific time-limited exemptions: metal plating (hard metal plating only in closed loop systems); and insect bait for control of leaf-cutting ants from <i>Atta</i> spp. and <i>Acromyrmex</i> spp. Sulfluramid should be named in the PFOS listing and its use sharply limited to cultivation of specific crops.</p>

---



## DICOFOL

Dicofol is a pesticide used for killing mites. It is related to DDT and has been used on fruits, vegetables, cotton, tea, and orchids. Dicofol is persistent under acidic conditions that can be found in a number of lakes and watersheds (including in the Arctic). Dicofol bioaccumulates in fish, and modeling data shows it can be transported to remote regions and that

it has a high capacity for enrichment in the Arctic environment. Dicofol is highly toxic to aquatic organisms and damages reproduction in birds. In mammals, dicofol damages the brain, thyroid, liver, and adrenal glands. Dicofol is manufactured from technical DDT and is a potential source of on-going DDT contamination. Dicofol and its metabolites have been

detected in milk, baby formula, eggs, fruits, vegetables, human breast milk, and blood.

The successful prohibition of the production, sale, and use of dicofol by a wide number of countries growing different crops within different geographies and climatic conditions indicates that technically and economically viable alternatives exist. Agroecological and integrated pest management practices have proven to be efficient as an alternative to dicofol in a number of countries, including in developing countries for cotton, tea, citrus, and a variety of other crops.

IPEN supports the POPRC recommendation in decision POPRC-13/1 to list dicofol in Annex A of the Stockholm Convention without specific exemptions.





## PFOA AND RELATED SUBSTANCES

PFOA is extremely persistent and does not degrade under relevant environmental conditions. It bioaccumulates in air-breathing land and marine mammals, including humans. PFOA is found in water, snow, air, sediment, and biota at remote locations including the Arctic. In humans, PFOA is associated with high cholesterol, ulcerative colitis, thyroid disease, testicular

cancer, kidney cancer, pregnancy-induced hypertension, and immune system effects. PFOA is transferred to the fetus through the placenta and to infants via breast milk. Related compounds, such as fluorotelomer alcohols, fluoropolymers, and fluorotelomer-based polymers, must be included in actions designed to eliminate PFOA releases since they can degrade to PFOA.



## Ending water pollution from firefighting foams

The POPRC recognized that fluorinated alternatives to PFOA and PFOS in firefighting foams should not be used, “due to their persistence and mobility, as well as their potential negative environmental, human health and socioeconomic impacts.” (POPRC-14/2) Due to the costly, highly polluting nature of firefighting foams and the availability of technically-feasible, cost-effective fluorine-free foams, no specific exemption should be granted for this use. If a specific exemption is granted, the POPRC recommendations on PFOA and PFOS use in firefighting foams should be adopted.

## Alternatives exist for all uses

The POPRC recommended listing PFOA in Annex A, but also included the possibility

of 10 specific exemptions. None of these can be justified based on the existence of technically feasible, available alternatives. If exemptions are granted, they should not exceed the Convention allowance of five years. In addition, new products containing PFOA should be labeled.



<b>Proposed PFOA Exemption from the POPRC</b>	<b>Time frame</b>	<b>IPEN Comment</b>
3 exemptions connected to semiconductor manufacturing (equipment or plant infrastructure, legacy equipment, photolithography, etch process)	5 years	Alternatives without PFOS or PFOA are available for photolithography and etch processes. For example, IBM eliminated both in 2010. The other proposals are not sufficiently defined.
Photographic coatings applied to films	5 years	Obsolete use of PFOA replaced by digital imaging, including in developing and transition countries.
Textiles for oil and water repellency for workers	5 years	Proposal relies on industry claims and does not state what specific products the exemption would cover or how worker protection can be achieved without relying on a toxic chemical-impregnated textile.
Invasive medical devices	5 years	Alternative medical devices made without PFOA have passed all regulatory requirements, are available on the market, and in use.
Implantable medical devices	5 years	Alternative medical devices made without PFOA have passed all regulatory requirements, are available on the market, and in use.

Proposed PFOA Exemption from the POPRC	Time frame	IPEN Comment
Firefighting foams	5 years	Cost-effective <b>non-fluorinated alternatives</b> are in use at major airports, industrial facilities, and military bases and perform as well as PFAS-containing foams.
For manufacture of semiconductor or related electronic devices; refurbishment parts containing fluoropolymers and/or fluoroelastomers with PFOA for legacy equipment or legacy refurbishment parts	10 years	See above for manufacturing. Legacy equipment proposal is not specific and includes thousands of unnamed parts. Retrofitting with parts that do not contain PFOA should be utilized, instead of continuing PFOA production and use.
To use PFOI (a PFOA-related substance) to make PFOB for producing pharmaceutical products “with a review of continued need for exemptions.”	Until 2036	In 2015, more than 100 governments agreed that environmentally persistent pharmaceutical products are an emerging policy issue of global concern in the SAICM process. A global exemption should not be adopted on behalf of a single company (Daikin) and exemptions for environmentally persistent pharmaceutical products should not be recommended.



# PFOS

When PFOS was listed in Annex B of the treaty in 2009, a very large number of specific exemptions and acceptable purposes accompanied its listing that permitted continued production and use. Based on the existence of technically feasible and available alternatives, most of the specific exemptions and acceptable purposes can be ended and some of them

can be converted from acceptable purposes to specific exemptions.

## Ending PFOS uses

Specific exemptions or acceptable purposes for the following 12 uses of PFOS should be ended: photo-imaging, photo-resist and anti-reflective coatings for semiconductors; etching agent for compound semiconductors and ceramic filters;

aviation hydraulic fluid; certain medical devices; firefighting foams, photo masks in semiconductor and LCD industries; hard metal plating; decorative metal plating; electric and electronic parts for some color printers and color copy machines; insecticides for control of red imported fire ants and termites; and chemically-driven oil production. Due to the costly, highly polluting nature of firefighting foams and the availability of technically-feasible, cost-effective **fluorine-free foams**, no specific exemption should be granted for this use. If a specific exemption is allowed for PFOS use in firefighting foams, the POPRC recommendations should be adopted.

### **Converting acceptable purposes to specific exemptions**

The following two acceptable purposes should be converted into specific exemptions: metal plating (hard metal

plating only in closed loop systems); and insect bait for control of leaf-cutting ants from *Atta* spp. and *Acromyrmex* spp. Use of sulfluramid in insect baits directly releases PFOS to land and water and has resulted in rapid proliferation of consumer uses that are not permitted by the Convention. While drop-in chemical replacements may not be desirable, the existence of some non-chemical alternatives and the significant PFOS pollution that results from this activity must be addressed. The acceptable purpose for PFOS use in insect baits should be converted to a specific exemption to spur more rapid adoption of alternatives. Sulfluramid should be named in the PFOS listing and its use sharply limited to cultivation of specific crops. Countries should prioritize national bans on sulfluramid import, production, and use to prevent further PFOS pollution.

## Proposed amendment of evaluation process

Russia has **proposed** amending the Stockholm Convention to alter the evaluation process for POPs candidates (UNEP/POPS/COP.9/15). The proposal claims that POPRC recommendations contained “insufficient reliable scientific information and analysis” but does not provide any justification for this claim. Instead, the proposal seeks to undermine the precautionary basis for decision-making by deleting a phrase in Article 8 which instructs the expert committee that in its evaluation, “Lack of full scientific certainty shall not prevent the proposal from proceeding.” The treaty provides two ways to meet persistence criteria and three ways to meet bioaccumulation criteria. However, the proposal seeks to require all criteria to

be met before a candidate can proceed in the listing. This ignores the scientific reality that data vary greatly among substances and the amendment appears to be proposed simply to block further recommendations for candidate listings. The current evaluation of candidate substances provides consideration of comprehensive scientific information and instructions for decision-making based on the Convention’s precautionary objective.<sup>1</sup> The current evaluation process should be preserved and the proposed amendment should be rejected.

---

1 “Mindful of the precautionary approach as set forth in Principle 15 of the Rio Declaration on Environment and Development, the objective of this Convention is to protect human health and the environment from persistent organic pollutants.”



*Established in 1998, IPEN is currently comprised of over 500 Participating Organizations in 116 countries, primarily developing and transition countries. IPEN brings together leading environmental and public health groups around the world to establish and implement safe chemicals policies and practices that protect human health and the environment. IPEN's mission is a toxics-free future for all.*

*IPEN gratefully acknowledges the financial support provided by the Government of Sweden, the Swedish Society for Nature Conservation (SSNC) and other donors that made the production of this document possible. The expressed views and interpretations herein shall not necessarily be taken to reflect the official opinion of any of the institutions providing financial support. Responsibility for the content lies entirely with IPEN.*



**a toxics-free future**

**[www.ipen.org](http://www.ipen.org) • [ipen@ipen.org](mailto:ipen@ipen.org) • [@ToxicsFree](https://www.instagram.com/ToxicsFree)**