Quick Guide to IPEN Views on POPRC-20

September 2024

The 20th meeting of the POPs Review Committee (POPRC) will take place in Rome, Italy, September 23 to 27, 2024. All meeting documents are available at https://chm.pops.int/TheConvention/POPsReviewCommittee/Meetings/POPRC20/Meetingdocuments/tabid/9913/Default.aspx

The POPRC is expected to take the following substantive decisions:

Chlorpyrifos

i) Adopt the Risk Management Evaluation.
ii) Adopt a recommendation for listing under the Convention to the 2025 Conference of the Parties (COP-12).

Medium chain chlorinated paraffins (MCCPs) and long-chain perfluorocarboxylic acids (LC-PFCAs), their salts and related compounds

Risk Management Evaluations and recommendations to list MCCPs and LC-PFCAs in Annex A of the Convention at COP-12 was adopted at POPRC in 2023. This meeting, POPRC is expected to:
i) Adopt the proposed addendums to the risk management evaluations.
ii) Based on the addendums, potentially adopt strengthened recommendations for listing with fewer exemptions.

Proposal for listing polyhalogenated dibenzo-p-dioxins and dibenzofurans in Annex C to the Stockholm Convention on Persistent Organic Pollutants

i) Verify that the nominated polyhalogenated dibenzo-p-dioxins and dibenzofurans meet the screening criteria in Annex D of the Convention and moving them forward to the Risk Profile stage.

Identification of POPs in stockpiles, articles in use and wastes

i) Take note of the report on the intersessional work concerning persistent organic pollutants in stockpiles, products and articles in use and in wastes
ii) Consider submitting the report together with recommendations to COP-12

Chlorpyrifos

Chlorpyrifos is a widely used organophosphate pesticide, applied as an insecticide in agriculture and as a biocide to control non-agricultural pests. In 56 countries, it is completely or partially banned, not allowed for use, or in other ways restricted, and its use is under review in several additional countries. Chlorpyrifos is listed as a chemical of emerging concern by the Arctic Monitoring and Assessment Program (AMAP). Despite this, it is still used in many countries, as described in a recent report from IPEN, even though agroecological approaches have been shown to be safe and effective alternatives (see e.g. case study from Ethiopia).

Chlorpyrifos has been found in biota at different trophic levels in remote regions such as caribou, seals, and polar bears. It has also been widely detected in the Arctic in abiotic compartments such as seawater, ice, and air.

Chlorpyrifos is designed to be highly toxic to insects, including bees and other pollinators. It is highly toxic to many aquatic organisms such as fish, frogs, and crustaceans, to soil living organisms such as earthworms, and to many terrestrial species, especially birds. It is also toxic to mammals. Both in vivo animal studies and epidemiological data provide evidence of developmental neurotoxicity in children, causing reduced IQ, loss of working memory, and attention deficit disorders, among other health conditions. In the European Union, it was not approved for renewal in 2019 because of its adverse health effects and the conclusion that no safe levels could be set for the substance.

Based on its persistence, potential for bioaccumulation, toxicity to aquatic organisms and terrestrial animals (including humans) and its widespread occurrence in environmental compartments including remote regions at levels of concern, the POPRC concluded in 2023 that chlorpyrifos is likely, as a result of its long-range environmental transport, to lead to significant adverse human health and/or environmental effects such that global action is warranted.

The Risk Management Evaluation provides evidence that countries in a wide range of climates, economic development levels, and applications have successfully phased out chlorpyrifos. Therefore, the proposal is to recommend the Conference of the Parties to the Stockholm Convention to consider listing chlorpyrifos under the Stockholm Convention in Annex A without exemptions at its meeting in 2025.

Conclusion

To prevent continued harm to human health and the environment, the POPRC should recommend listing chlorpyrifos in Annex A with no specific exemptions at COP-12.

Medium-Chain Chlorinated Paraffins (MCCPs)

MCCPs are a large class of high production volume industrial chemicals used as flame retardants, plasticizers, in metalworking fluids, and as additives to paints and sealants. At its meeting in 2023, the POPRC adopted the Risk Management Evaluation for MCCPs and recommended them for listing in Annex A with specific exemptions. POPRC further invited Parties and Observers to provide information that would assist in the possible strengthening of its recommendations.

Two options for the chemical identity of MCCPs are included in paragraph 2a and 2b of the draft decision. The two options have a different scope for which congener profile should be included. Both meet all the convention criteria but option 2(a) would exclude congeners that have been identified as POPs in the risk profile. 2(b) would therefore be the most effective for protecting human health and the environment.

The most effective control measure would be to prevent the manufacturing of all chlorinated paraffins. Meanwhile, manufacturers can control concentrations of MCCPs through careful selection of alkane feedstocks. Any concentration limit must be evaluated carefully and be protective to ensure that the Convention meet its objective. If a concentration limit is adopted, it should not exceed 0.1% for the sum of MCCP congeners but preferably be lower. As described in the Risk Management Evaluation, an 0.1% limit would result in an emission reduction of MCCPs of 3,000-6,000 tonnes, and a lower threshold would reduce emissions even further.

Safer alternatives to MCCPs are widely in commercial use, as well as alternative product design options. Also, already in 2017, the Swedish Chemicals Agency (KEMI) provided evidence that substitution in electrical and electronic equipment comes with a low cost, especially compared to the benefits to human health and the environment. Still, the POPRC recommendation in 2023 includes a long list of vague, broad categories of exemptions. A recent study showed that these exemptions are expected to lead to the generation of an additional 10 million tonnes of hazardous wastes. In addition, the proposed exemptions include uses that will lead to continued human and environmental exposures, such as calendered PVC films that are commonly used for food packaging, metalworking fluids that will lead to direct emissions of MCCPs into the environment, and in running tracks that have been identified as of "special concern because of their relative high exposure for children".

Conclusion
POPRC should adopted a strengthened recommendation for listing MCCPs in Annex A, with the congeners specified in option 2(b), and without exemptions. Any concentration limit should be maximum 0.1% for the sum of MCCP congeners, but preferably lower. Considering the range of available alternatives, no specific exemptions are warranted.

However, should specific exemptions still be considered, it is important that they are for specific, narrow, time-limited uses, accompanied with obligation for traceability to enable their safe use and environmentally sound management of their wastes.

Long-chain perfluorocarboxylic acids (PFCAs), their salts, and related compounds

Long-chain PFCAs (with carbon chain lengths C9-C21), their salts and related compounds are, or have been, widely used in a range of both industrial and consumer applications, including in coatings, cookware, fabric/carpet protectors, textile impregnation agents, production of fluoropolymers, and firefighting foams. Long chain PFCAs are also unintentionally produced during the manufacture of other PFAS, including fluorinated polymers and during waste incineration. Releases of long-chain PFCAs, their salts and related compounds occur throughout their lifecycle.

At its meeting in 2023, the POPs Review Committee adopted a decision to recommend to the Conference of the Parties that it consider listing long-chain perfluorocarboxylic acids, their salts and related compounds in Annex A to the Convention with specific exemptions.

Any proposed exemptions must be thoroughly evaluated by the POPRC and justified by a detailed description of what alternatives have been evaluated and why they are not feasible options. Therefore, since evidence for the need for several of the exemptions was missing, an intersessional working group was established with the intention of strengthening the recommendation on the listing of the chemicals. The further assessment of information did not yield any additional justification for including these exemptions.

Conclusion
Long-chain perfluorocarboxylic acids, their salts and related compounds should be recommended for listing in Annex A with no specific exemptions. There are viable and safer alternatives available on the market today for all uses. Exemptions would unnecessarily perpetuate exposures and harms to workers, communities, and the global environment.

To avoid harmful (so-called "regrettable") substitution, PFAS alternatives should not be considered. Therefore, the POPRC should include a recommendation to not use PFAS alternatives in its recommendation, as has previously been done for PFOA and PFHxS.

Identification of POPs in stockpiles, articles in use and wastes

There are significant challenges for Parties to fulfill their Convention obligations in relation to traceability of POPs. The POPRC was therefore requested to "consider options for identifying persistent organic pollutants in stockpiles, products and articles in use and in wastes and issues related to the production, import and export of products and articles containing persistent organic pollutants". In the draft report, some points that would benefit from further clarification include:

- Disposal of wastes containing POPs, including products and articles upon becoming wastes, are not allowed to lead to the POPs being recycled (Convention Article 6).
- That there are no singular analytical methods that can measure all listed POPs and that the analytical methods listed are only applicable to some POPs.
- That improving transparency and traceability of POPs is especially important in sectors where exemptions have often been requested and approved, such as the construction, vehicle, and aviation industries, which are sectors that also use high volumes of POPs.[1]

Information summarized in the report confirms that Parties are frequently encountering challenges in identifying POPs in stockpiles, products and articles in use and wastes. It also shows that there are financial and technical limitations of relying on downstream analysis, and that there is currently very limited transparency and information sharing throughout the supply chain. The lack of transparency means that costly, time-consuming analytical methods are the only option to determine POPs content in products, which is not a realistic option for most Parties. These challenges

[1] See e.g. the Risk Management Evaluations and COP decisions for UV-328, Dechlorane Plus, DecaBDE, Hexabromocyclododecane and SCCPs.

hinder the implementation of the Convention and lead to harm to human health and the environment, as shown in a range of IPEN reports.[2]

However, the report also shows that that labeling and other identification systems (e.g. databases) improve implementation of the Convention. Therefore, recommendations to the COP should include requirements for transparency and traceability (e.g. through labeling and/or publicly available databases) when exemptions are granted for POPs.

In addition, synergies with existing systems such as the GHS, and product specific approaches should be further explored. Therefore, the COP should mandate further work on improving identification, transparency and traceability of POPs in in stockpiles, products and articles in use and in wastes and issues related to the production, import and export of products and articles containing persistent organic pollutants.

Proposal for listing polyhalogenated dibenzo-p-dioxins and dibenzofurans in Annex C to the Stockholm Convention

Dioxins and furans can be generated unintentionally when materials are burned or heated. Polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs) were listed under the Stockholm Convention among the initial "dirty dozen". Their brominated counterparts, polybrominated dibenzo-p-dioxins and furans (PBDD/Fs), have similar chemical structures and environmental and health concerns.

The proposal to list PxDD/Fs in Annex C meet the criteria in Annex D since they

- Are persistent, with higher estimated half-lives than analogous PCDD/F congeners.
- Bioaccumulate, with log Kow values ranging from 7.0-11.5 and have similar uptake and elimination patterns as analogous PCDD/Fs. PBDD/Fs have also been detected in human tissues and breast milk.
- Have potential for long-range environmental transport, as verified both by modeling and environmental monitoring. A recent modeling study showing that each of the investigated PBDD/Fs congeners exceed the threshold for POP-like accumulation in remote regions when emitted to air or water. Sampling in remote regions has shown the presence of PBDD/Fs, including in ringed seals and pilot whales caught around the Faroe Islands.
- Have adverse effects for human health and the environment. Brominated dioxins and furans exhibit similar toxic impacts as their chlorinated counterparts. They

[2] see e.g Hazardous Chemicals in Plastic Products in African and Arabic Countries, Widespread Chemical Contamination of Recycled Plastic Pellets Globally, and Environmental, Food and Human Body Burden of Dechlorane Plus in a Waste Recycling Area in Thailand.

can, for example, affect brain development, damage the immune system and fetus, show liver toxicity or induce carcinogenesis.

Brominated dioxins have also been detected in consumer products. IPEN has shown that brominated dioxins contaminate children's toys made from recycled plastics that contain polybrominated diphenyl ethers (PBDEs). The concentrations were similar as concentrations that are found in hazardous wastes. Brominated dioxins and furans are also frequently found in free-range eggs due to contamination from waste management sites. Also, a recent global survey of dioxin and thyroid hormone-like activities associated with consumer products and toys found that brominated dioxins are often present in high levels in consumer products made from black plastics that contain brominated flame retardants. The study concludes that children's interaction with such toys "may significantly contribute to the daily uptake of dioxin."

Conclusion
The POPRC should conclude that the proposal meets the criteria set out in Annex D and develop a workplan for preparing a draft risk profile.