

**Stockholm Convention  
on Persistent Organic  
Pollutants**

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**Conference of the Parties to the Stockholm  
Convention on Persistent Organic Pollutants  
Eleventh meeting**  
Geneva, 1–12 May 2023  
Item 5 (e) of the provisional agenda\*

**Matters related to the implementation of the  
Convention: listing of chemicals in Annex A, B or C to  
the Convention**

## **Recommendation by the Persistent Organic Pollutants Review Committee to list methoxychlor in Annex A to the Convention and draft text of the proposed amendment**

### **Note by the Secretariat**

#### **I. Introduction**

1. At its sixteenth meeting, by decision POPRC-16/2, the Persistent Organic Pollutants Review Committee adopted a risk profile for methoxychlor<sup>1</sup> and decided that methoxychlor was likely, as a result of its long-range environmental transport, to lead to significant adverse human health and environmental effects such that global action was warranted.
2. At its seventeenth meeting, by decision POPRC-17/1, the Committee adopted a risk management evaluation for methoxychlor<sup>2</sup> and decided, in accordance paragraph 9 of Article 8 of the Stockholm Convention on Persistent Organic Pollutants, to recommend to the Conference of the Parties to the Stockholm Convention that it consider listing methoxychlor in Annex A to the Convention without specific exemptions.
3. Pursuant to paragraph 2 of Article 21 of the Convention, on 27 October 2022, the Secretariat communicated the Committee's recommendation on methoxychlor to the Parties and signatories to the Convention. The communication, in which the Secretariat also invited Parties to provide comments, was circulated more than six months before the eleventh meeting of the Conference of the Parties. A compilation of comments received from Parties relating to the proposed listing of chemicals in Annexes A, B and/or C to the Convention recommended by the Persistent Organic Pollutants Review Committee is set out in document UNEP/POPS/COP.11/INF/24. The executive summary of the risk management evaluation for methoxychlor and the decision of the Committee setting out its recommendation are reproduced in the annex to the present note. The executive summary is presented without formal editing.
4. As is indicated in paragraph 9 of Article 8 of the Convention, the Conference of the Parties, taking due account of the recommendations of the Committee, including any scientific uncertainty, is to decide, in a precautionary manner, whether to list the chemical, and specify its related control

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\* UNEP/POPS/COP.11/1.

<sup>1</sup> UNEP/POPS/POPRC.16/9/Add.1.

<sup>2</sup> UNEP/POPS/POPRC.17/13/Add.1.

measures, in Annexes A, B and/or C to the Convention. If the Conference of the Parties decides to list the chemical in Annexes A, B and/or C, the respective annex or annexes will be amended in accordance with Articles 21 and 22 of the Convention.

## II. Proposed action

5. The Conference of the Parties may wish to adopt a decision along the following lines:

*The Conference of the Parties,*

*Having considered* the risk profile and the risk management evaluation for methoxychlor as transmitted by the Persistent Organic Pollutants Review Committee,<sup>3</sup>

*Taking note* of the recommendation by the Persistent Organic Pollutants Review Committee that methoxychlor be listed in Annex A to the Convention without specific exemptions,<sup>4</sup>

*Decides* to amend part I of Annex A to the Stockholm Convention on Persistent Organic Pollutants to list methoxychlor without specific exemptions by inserting the following row:

<i>Chemical</i>	<i>Activity</i>	<i>Specific exemption</i>
Methoxychlor*	Production	None
	Use	None

<sup>3</sup> UNEP/POPS/POPRC.16/9/Add.1; UNEP/POPS/POPRC.17/13/Add.1.

<sup>4</sup> UNEP/POPS/COP.11/12.

## Annex

# Risk management evaluation for methoxychlor and the recommendation of the Persistent Organic Pollutants Review Committee

## I. Executive summary of the risk management evaluation<sup>1</sup>

1. At its sixteenth meeting, the Persistent Organic Pollutants Review Committee (POPRC) reviewed and adopted the draft risk profile on methoxychlor. The POPRC concluded that methoxychlor is likely, as a result of its long-range environmental transport, to lead to significant adverse human health and environmental effects such that global action is warranted. A risk management evaluation was therefore prepared that includes an analysis of possible control measures for methoxychlor in accordance with Annex F to the Convention. Parties and observers were invited to submit to the Secretariat the information specified in Annex F by 1 March 2021.
2. Responses regarding the information specified in Annex F to the Stockholm Convention have been provided by Australia, Belarus, Canada, Columbia, Costa Rica, Egypt, Hungary, Mexico, Monaco, Norway, Peru, Republic of Korea, Russian Federation, Sweden, Thailand, United Kingdom of Great Britain and Northern Ireland (UK) and by Alaska Community Action on Toxics (ACAT), International Pollutants Elimination Network (IPEN) and Pesticide Action Network (PAN). The risk management evaluation is based on these responses, additional literature sources, including cited references in the risk profile on methoxychlor, and the risk management evaluation of dicofol, which had similar uses to methoxychlor and was also used as a replacement for DDT.
3. Methoxychlor is an organochlorine pesticide (OCP) which has been used as an insecticide effective against a wide range of pests on, for example field crops, vegetables, fruits, ornamentals, livestock and pets, as well as for general nuisance pests such as mosquitos and flies. Methoxychlor has been used both in commercial agricultural settings, as well as in domestic environments. Based on information from the United States of America (USA), where the production of methoxychlor peaked in the late 1970s to early 1980s, it has been estimated that the maximum global production around this time was 8 000 tonnes/year (Götz *et al.*, 2008). Like in the USA, where production of methoxychlor steadily decreased up until it was completely phased out by 2004, the production and use of methoxychlor has been phased out or banned in many countries for almost 20 years. As a result, the global use is believed to have declined sharply. No reliable information on the current production or use of methoxychlor at a global scale has been found in the public domain.
4. Possible control measures, some of which are currently applied by several nations, cover a broad spectrum including the prohibition and restriction of production, use, import and export; the establishment of exposure limits and requirements for Personal Protective Equipment (PPE) in workplaces; the environmentally sound management of obsolete stockpiles; the clean-up of contaminated sites and the establishment of maximum residue limits in water, soil, sediment and food and feed.
5. An analysis of possible control measures demonstrated that a full prohibition is the most effective control measure to protect human health and the environment, and that a restriction on the production, use, import and export of methoxychlor would be less effective. No critical uses have been identified, hence there appears to be no need for a restriction limiting the use of methoxychlor to only critical uses. The nature of the economic impacts of a full prohibition and a restriction on specific uses of methoxychlor would likely be similar, although those of the latter could be more limited in scale. It is important to highlight that information on the scale of economic costs arising from a restriction on methoxychlor, or from other control measures, could not be identified, mainly because the manufacturing and use has declined during the last 20 years and little information is available on remaining uses. Annex F information provided on costs, including environmental and health costs, related to possible control measures in meeting risk reduction goals for methoxychlor, indicated that they should not pose any additional costs or only low costs. Some countries reported that this is not applicable in their country, as the substance is already phased out for decades.
6. Measures to reduce exposures and releases are less effective than a prohibition or restrictions would be. Technically it would be possible to limit further occupational exposure by technical means and by imposing restrictions on workers' activities. To protect workers during formulation and

<sup>1</sup> UNEP/POPS/POPRC.17/13/Add.1.

manufacture, occupational exposure could be reduced by ensuring that (if present) production facilities use closed-systems only. For professional uses in agriculture and at production facilities, when exposure likely occurs, PPE should be worn at all times to better protect workers, particularly farm workers during preparation and application of methoxychlor. Concerted efforts working with farming communities and other end users would likely be beneficial to help manage the collection and safe destruction of any obsolete stockpiles to prevent loss to the environment due to mismanagement. However, the effectiveness of these measures, particularly the use of PPE, has not been demonstrated and they would likely be difficult to implement and monitor worldwide. Additionally, use of PPE does not prevent or reduce environmental impacts.

7. The effectiveness of residue limits and monitoring as control measures to reduce human and environmental exposure globally would likely be more limited than the effects of a prohibition or restrictions. Establishment of maximum residue limits for methoxychlor are predominantly focused on food, feed and drinking water. Some countries have monitoring programs in place for controlling pesticide residues in food, but such monitoring is likely lacking in many parts of the world. Further data on development of environmental limits for the natural environment would be needed to draw more complete conclusions on the feasibility of development and implementation of monitoring programs as a method by which to control the risks associated with methoxychlor.

8. A prohibition on production and use would be the most effective control measure for protecting the environment and human health. A prohibition is considered technically and economically feasible considering there has been a broad phase-out in many countries and that the global level of production and use appear to be very limited. Furthermore, no specific examples of critical uses have been provided by the Parties and observers submitting information under Annex F.

9. Alternatives to methoxychlor have been identified by considering the historic uses of methoxychlor for specific pests (e.g., chiggers, mosquitos and elm bark beetles) and for specific applications (e.g. crops and livestock), as well as by investigating which current practices are commonly used for these purposes. Alternatives consist of chemical alternatives (for example, among the pesticide classes of pyrethroids, avermectins, neonicotinoids and organophosphates), as well as of non-chemical alternatives. Integrated pest management (IPM), sustainable agroecological and organic agricultural practices, biological control systems and some botanical preparations are examples of non-chemical alternatives to methoxychlor, which are widely available. The widespread use of many alternatives to methoxychlor suggests technical and economic feasibility of substituting methoxychlor globally. For some of the alternatives presented, particularly the chemical alternatives, there are human health and environmental concerns regarding their use, which need to be considered carefully when choosing alternatives.

10. A direct comparison of these alternatives to methoxychlor, in terms of costs, technical feasibility, efficacy, and availability is constrained by the lack of information on the use of methoxychlor. However, the widespread use of alternatives suggests that at least some options will be effective, available, and feasible in all parts of the world. The choice of alternatives may vary by country due to regulations, types of pests, market dynamics or other variables such as climatic conditions. As methoxychlor is banned or not used in many countries, substitution with alternatives is assumed both technically feasible and of little economic impact, which is confirmed by information under Annex F submitted by some Parties and observers.

11. In conclusion and in accordance with paragraph 9 of Article 8 of the Stockholm Convention on POPs, the POPRC recommends to the Conference of the Parties to the Stockholm Convention to consider listing methoxychlor under the Stockholm Convention in Annex A without specific exemptions.

## II. Decision setting out the recommendation of the Committee

### POPRC-17/1: Methoxychlor

*The Persistent Organic Pollutants Review Committee,*

*Having concluded* in its decision POPRC-15/3 that the screening criteria set out in Annex D to the Stockholm Convention on Persistent Organic Pollutants have been fulfilled for methoxychlor,

*Having evaluated* the risk profile for methoxychlor adopted by the Committee at its sixteenth meeting<sup>2</sup> in accordance with paragraph 6 of Article 8 of the Convention,

<sup>2</sup> UNEP/POPS/POPRC.16/9/Add.1.

*Having decided* in its decision POPRC-16/2 that methoxychlor is likely, as a result of its long-range environmental transport, to lead to significant adverse human health and environmental effects such that global action is warranted,

*Having completed* the risk management evaluation for methoxychlor in accordance with paragraph 7 (a) of Article 8 of the Convention,

1. *Adopts* the risk management evaluation for methoxychlor;<sup>3</sup>
2. *Decides*, in accordance with paragraph 9 of Article 8 of the Convention, to recommend to the Conference of the Parties that it consider listing methoxychlor in Annex A to the Convention without specific exemptions.

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<sup>3</sup> UNEP/POPS/POPRC.17/13/Add.1.