



## United Nations Environment Programme

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**Stockholm Convention on Persistent Organic Pollutants**  
**Persistent Organic Pollutants Review Committee**  
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Item 4 (c) of the provisional agenda\*

**Operational issues: listing chemicals the transformation products of which are chemicals proposed for listing in Annexes A, B or C of the Convention**

### **Consideration of chemicals the transformation products of which are chemicals proposed for listing in Annexes A, B or C of the Convention**

#### **Note by the Secretariat**

1. The issue of chemicals that have transformation products which are being considered for listing in Annexes A, B or C of the Stockholm Convention on Persistent Organic Pollutants (POPs) was addressed by the Criteria Expert Group, established under the Intergovernmental Negotiating Committee that developed the Convention, at its second session. Paragraph 50 of the report<sup>1</sup> of the session states:

“It was also agreed that the assessment process undertaken by any subsidiary body or bodies under the future convention should include the consideration of transformation products of that substance that possessed POPs characteristics as defined in the future convention. In that regard, Parties should be able to nominate organic substances that were not in themselves POPs, but whose transformation products satisfied the criteria established under the future convention.”

2. This concept is reflected in the chapeau of paragraph 1 of Annex D of the Stockholm Convention, which states:

“A Party submitting a proposal to list a chemical in Annexes A, B and/or C shall identify the chemical in the manner described in subparagraph (a) and provide the information on the chemical, *and its transformation products where relevant*, relating to the screening criteria set out in subparagraphs (b) to (e)” [emphasis added].

3. To determine whether the transformation products are relevant, both the transformation process and the transformation products themselves need to be considered. Consideration should be given to whether the chemical is transformed and, if so, at what rate. The duration of transformation then needs to be compared with the persistence of the transformation product. Whether or not the transformation products have persistent organic pollutant properties will be determined by the screening and risk profile process outlined in Article 8 and Annexes D and E of the Convention.

\* UNEP/POPS/POPRC.2/1.  
1 UNEP/POPS/CEG/2/3.

4. If it is demonstrated that a proposed chemical – in other words, a chemical which, according to the Committee, meets the criteria specified in Annex D and which, based on a risk profile developed by the Committee, is likely as a result of its long-range transport to lead to significant adverse human health or environmental effects such that global action is warranted – is a transformation product of one or more precursor chemicals,<sup>2</sup> the precursors could be considered as part of the risk management evaluation to be developed by the Committee in accordance with Article 8 of the Convention. The risk management evaluation would address the precursor whose transformation product exhibits the characteristics of a persistent organic pollutant, as it is the precursor which can be controlled under the Convention through measures to eliminate or restrict its production, trade, use or release. Correspondingly, the recommendation by the Committee to the Conference of the Parties for listing in Annexes A, B or C could include the precursor.

5. Under the Convention, the way to address precursor chemicals which are not included in a proposal submitted by a Party would be to list the proposed chemical in Annex C (unintentional production) and include provisions designed to reduce or eliminate the release of the proposed chemical due to transformation from the precursor chemical.

6. In order to select which precursor should be considered in a risk management evaluation, a number of options are available to the Committee. For example, the Committee may wish:

(a) To analyse each precursor chemical to determine whether it is transformed within a certain time (to be determined) into a proposed chemical;

(b) To analyse each precursor chemical to determine whether it has the potential to be transformed into a proposed chemical;

(c) To adopt the view that, when a precursor chemical contains the proposed chemical in its structure, provided that the chemical's persistence in the environment is sufficiently long-term, it can be reasonably sure that transformation will eventually occur.

7. The issue of precursor chemicals raises a number of questions which need to be considered by the Committee, including:

(a) How to determine if the process that gives rise to the transformation process or product is relevant;

(b) How to deal with salts of proposed chemicals;

(c) How to assess and list chemicals that contain the proposed chemicals as a structural unit.

8. In the case of perfluorooctane sulfonate (PFOS), the draft risk profile of which is to be considered by the Committee at its second meeting, the issue of precursors is significant. The proposing country (Sweden) provided a list of 93 precursors of PFOS. These are chemicals which are expected to be transformed into PFOS after release into the environment.

9. On the closely-related issue of salts of proposed chemicals, PFOS and its salts are normally dissociated in aqueous solutions and in terrestrial and aqueous organisms into the cation and the PFOS anion. The persistent organic pollutant characteristics are related to the PFOS anion. In a similar example, considered under the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, it was recognized that the pesticide dinitro-ortho-cresol (DNOC) was produced as an acid and certain salts and was active as a pesticide due to the properties of the anion. The unintended risk which led to a ban of the pesticide was also due to the anion. Although only some of the possible salts were actually marketed and regulated, it was agreed that other salts would lead to the same problems and therefore, in decision RC-1/3, the Conference of the Parties to the Rotterdam Convention decided to list the pesticide in Annex III of the Convention as "DNOC and its salts, such as ammonium salt, potassium salt and sodium salt".<sup>3</sup> This listing includes all salts of DNOC. A similar approach could be considered for PFOS and for other proposed chemicals for which the issue of salts applies.

10. In addition, the Committee may wish to identify what information is needed on the transformation process of a precursor chemical that is transformed into a proposed chemical, in this case PFOS.

<sup>2</sup> The term "precursor chemical", or "precursor" for short, is used in the present note to refer to a chemical that is likely to be transformed into another, which is referred to as the "transformation product".

<sup>3</sup> UNEP/FAO/RC/COP.1/33, annex I.

**Possible action by the Committee**

11. The Committee may wish:

- (a) To consider the possible options for selecting precursor chemicals for consideration in the risk management evaluations listed in paragraph 6 above;
  - (b) To discuss the questions raised in paragraphs 7 and 10 above;
  - (c) To consider developing a draft approach on the issue of consideration of chemicals the transformation products of which are chemicals that are proposed for listing in Annex A, B or C of the Convention for future consideration by the Conference of the Parties.
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