



## CONTROVERSIAL ACTIVITIES

# HAZARDOUS CHEMICALS

## 0. Background

### 0.1. The UNEP 12 Chemicals: POPs

The production of Persistent Organic Pollutants is considered to be unsustainable because these substances bio accumulate in the food chain. At the Stockholm UNEP Convention on POPs, in May 2001, it has been decided to eliminate 12 chemicals (their use should be phased out worldwide<sup>1</sup>). The convention covers **9 pesticides, PCBs** (polychlorinated biphenyls) and two by-products (**dioxins and furans**). In future, other substances might be added.

Use (and importation) of some of these products is already forbidden in some countries but still allowed for production and exportation in countries where use/importation is still permitted.

Pesticides of the POP list are: *Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Mirex, Toxaphene*.

Pesticides in general (not only from the POP list) are chemicals aimed at protecting plants, animals and humans, i.e. to kill pests (unwanted plants and animals). The use of pesticides has many negative side effects and alternatives are available.

Pharmaceutical pesticides aimed at the treatment of humans or animals infected by pest are not taken into consideration here.

### 0.2. The Ospam Priority List

An additional list of potential problematic chemicals has been identified by Ospam (the Convention for the Protection of the Marine Environment of the North East Atlantic - the OSPAR Convention held in Oslo and Paris).<sup>2 3</sup> This list is by far more complicated than the UNEP one since it groups not only commercial names (hereafter in *italic*, f.i. *endosulphan*), but also families of substances (here after in **bold**) and specific chemical names (which are especially long and often contain numerals). Here is a simplified version of the OSPAR list, with CAS numbers<sup>4</sup> between square brackets, when available:

<sup>1</sup> The Stockholm Convention sets out control measures covering production, import, export, disposal and use of POPs.

<sup>2</sup> The Ospam convention covers 15 States of the North East Atlantic Region and the European Union. In 1998, Ministers of the OSPAR countries agreed to a target for the cessation of discharges, emissions and losses of all hazardous substances to the marine environment in one generation (i.e. by 2020).

<sup>3</sup> The EU White paper on chemicals suggests that manufacturers, importers and downstream users will be responsible for the safety of chemicals and should provide information on use and exposure. It suggests that companies producing >1,000 tonnes will need to report by end 2005, >100 tonnes by end 2008, >1 tonne by end 2012. The paper references the UNEP 12 and Ospam priority list of chemicals.

<sup>4</sup> CAS registry numbers are unique numerical identifiers for chemical compounds. The *Chemical Abstract Service*, a division of the *American Chemical Society*, assigns these identifiers to every chemical that has been described in the literature. About 20 million compounds have received a CAS number so far. The intention is to make database searches more convenient, as chemicals often have many names. A given listed toxic chemical or mixture may be known by many names



**Alkylphenols** (nonylphenol [25154-52-3], octylphenol [27193-28-8]) are used as intermediate in the manufacture of detergents and plastics and many other chemicals.

**Brominated Flame Retardants** (Polybrominated diphenyl ethers, Polybrominated biphenyls).  
Cadmium [7440-43-9].

*Dicofol* [115-32-2] is used as a pesticide.

*Endosulphan* used as an insecticide.

**Hexachlorocyclohexane Isomers** (incl. *Lindane* [608-73-1]), used as pesticides.

Hexachlorocyclopentadiene [77-47-4], used as intermediate in chemical synthesis.

Hexamethyldisiloxane [107-46-0] used as intermediate in cosmetic manufacture.

**Lead and organic lead compounds** [7439-92-1].

**Mercury and organic mercury compounds** [7439-97-6].

**Methoxychlor** [72-43-5] used as an insecticide.

*Musk Xylene* (4,4,6-trinitro-1,3-dimethyl-5-tertiary butyl benzene) used in cosmetics.

**Organic tin compounds** (tributyltin [56573-85-4], triphenyltin [668-34-8]).

Pentachlorophenol [87-86-5].

**Phthalates** (only some of them e.g. dibutylphthalate [84-74-2], diethylhexylphthalate).

**Polyaromatic Hydrocarbons** (e.g. Fluoranthene [206-44-0]; Benzo[a]pyrene [50-32-8];

Benzo[b]fluoranthene [205-99-2]; Benzo[g,h,i]perylene [191-24-2]; Indeno[1,2,3-cd]pyrene [193-39-5]).

**Short Chained Chlorinated Paraffins.**

Tetrabromobisphenol-A [79-94-7], a flame retardant agent.

Trichlorobenzene (3 isomers), used as solvent, insecticide and intermediate in chemical synthesis.

tert-Butyl Toluene (or 1(1,1-Dimethylethyl)-4-Methylbenzene) [98-51-1], used in lubricants.

Dodecylphenol (or 2,4,6-Tris(1,1-dimethylethyl)phenol), used as an anti-oxidant in rubber and plastics.

### 0.3. Ozone Depleting Chemicals (ODCs)

The following chemicals deplete the ozone layer and are subject to international protocols on phase out, although schedules differ by country:

**CFCs** or Chlorofluorocarbons (used as refrigerants, solvents, and foam blowing agents)

**HCFCs** or Hydrochlorofluorocarbons (one class of chemicals being used to replace the CFCs, because their ozone depleting potential is lower than CFCs; do not confuse with HFCs where chlorine is absent)

Methyl chloroform (= 1,1,1-Trichloro-ethane) (industrial solvent)

Methyl bromide (this compound is used as a pesticide to fumigate soil and many agricultural products)

Carbon tetrachloride [56-23-5] (used as solvent or catalyst)

**Halons** (fire extinguishing agents)

### 0.4. Other chemicals of concern

In addition, some other chemicals have been identified by environmental organisations as hazardous to human health and/or the environment, but not (yet) planned for phasing out or limiting emissions (there is still no international agreement). For instance, among a lot of products, most often cited ones are:

Other chemical pesticides that are not allowed in organic agriculture

Vinyl Chloride [75-01-4]

Poly-Vinyl Chloride (PVC)<sup>5</sup>

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but it will have only one CAS number. For example, methyl ethyl ketone and 2-butanone are synonyms for the same toxic chemical and thus have only one CAS number (78-93-3). On the contrary, isomers of a compound will have different CAS numbers.

<sup>5</sup> NB: Only PVC as raw material is considered here and not (semi-)finished products made from PVC, like window frames, packaging (parts), toys, office supplies, or any other wares.



## 1. Degree of involvement

### 1.1 Major involvement

Companies are regarded as major involved in activities related to controversial hazardous chemicals if they:

- Have consolidated participation in other companies, activities in the field of production of POPs or ODCs (no minimum revenue threshold).
- Have consolidated participation in other companies, activities in the field of production of OSPAR chemical or other chemicals (included in the category 4 above) AND these activities globally generate 5% or more of the company's revenue.
- Have non-consolidated participation in companies that are, directly or indirectly through consolidated participations, involved in activities in the field of production of POPs or ODCs AND these activities generate 1% or more of the company's revenue.
- Have non-consolidated participation in companies that are, directly or indirectly through consolidated participation, involved in activities in the field of production of OSPAR chemical or other chemicals (included in the category 4 above) AND these activities generate 10% or more of the company's revenue.
- Have consolidated participation activities in the field of sale of chemicals (included in any of the 4 categories above) AND if these activities account for 10% or more of the company's revenue.

### 1.2. Minor involvement

Companies are regarded as minor involved in activities related to controversial hazardous chemicals if they:

- Have non-consolidated participation in companies that can be considered as 'major involved' AND the chemical related activities generate less than 1% of the company's revenue (if more: major involved).
- Have consolidated participation activities in the field of sale of chemicals (included in any of the 4 categories above) AND if these activities account for more than 1% and less than 10% of the company's revenue.
- Have consolidated participation in other companies, activities in the field of production of OSPAR chemical or other chemicals (included in the category 4 above) AND these activities globally generate less than 5% or more of the company's revenue.
- Have non-consolidated participation in other companies, activities in the field of production of OSPAR chemical or other chemicals (included in the category 4 above) AND these activities globally generate less than 10% of the company's revenue.

### 1.3. No involvement

Companies are regarded as not being involved in activities related to controversial hazardous chemicals if they:

- Have consolidated participation activities in the field of sale of chemicals (included in any of the 4 categories above) AND if these activities account for less than 1% of the company's revenue.



## Summary

	<b>Production of POPs or ODCs (categories 1 and 3)</b>	<b>Production of chemicals included in category 2 and 4</b>	<b>Sales of chemicals included in any of the 4 categories</b>
<b>Major involvement</b>	<ul style="list-style-type: none"> <li>- Always in case of consolidated participation or own operations</li> <li>- In case of non-consolidated participation: if more than 1% of revenue</li> </ul>	<ul style="list-style-type: none"> <li>- If 5% or more of revenue in case of consolidated participation or own operations</li> <li>- In case of non-consolidated participation: if more than 10% of revenue</li> </ul>	If 10% or more of revenue
<b>Minor involvement</b>	<ul style="list-style-type: none"> <li>- non-consolidated participation if less than 1% of revenue</li> </ul>	<ul style="list-style-type: none"> <li>- If less than 5% of revenue in case of consolidated participation or own operations</li> <li>- In case of non-consolidated participation: if less than 10% of revenue</li> </ul>	If more than 1% and less than 10% of revenue
<b>No involvement</b>			If less than 1%

