Selected POPs waste "Hot Spots" around the World

- Chemical works and incinerators
- Dioxin contamination
- Saginaw and AuSable Rivers, Michigan, USA
- Lake Charles/Calcasieu Estuary, Louisiana, USA
- Rouyn-Noranda, Canada
- Hamilton, Canada
- Sydney, Canada
- Cidade dos Meninos, Brazil
- Wingmoor farm, UK
- Asse II mine, Germany
- Vanderbijlpark, South Africa
- Klatovy-Luby, Czech Republic
- Peshawar, Pakistan
- Karabash city and Tobolsk city, Russia
- Old Korogwe, Tanzania
- Da Nang, Bien Hoa, Vietnam
- Nose Town, Japan
- Whyalla, Australia
- Doncaster tip, UK
- Belaruchi, Belarus
- Dzerzhinsk, Russia
- Teshima Island, Japan
- McMurdo landfill, Antarctica
- Quarters Bay, Antarctica

Source categories of waste contamination by POPs:
- Pesticides production/storage
- Incineration
- Metalworking
- Chemical industry
- Metallurgical industry

Data about POPs levels in different environmental compartments:
- Soil
- Water
- Waste
- Food (milk, eggs)
- Wildlife (fish)
- Human tissues (breast milk, blood)
- Air

POPs:
- PCDD/F – Polychlorinated dibenzo-p-dioxins
- PBDE – Polybrominated diphenyl ethers
- PCB – Polychlorinated Biphenyls
- DDT – Dichlorodiphenyltrichloroethane
- HCB – Hexachlorobenzene
- DDE – Dichlorodiphenylchloroethane (pesticide)
- Other OCPs – Other Organochlorine Pesticides
World map of POPs waste hotspots

POP _s: persistent organic pollutants - are hazardous chemicals which have distinctive and very dangerous properties. POPs persist in the environment for a long time. They can travel long distances through the air or water, and can be bioaccumulated in living organisms and stored in their tissues and fat, and then returned to the environment. Some of them are persistent in the environment, while others are not persistent, and others have a long but limited persistence. Long-lived POPs may pose a risk to the environment and human health for many years. POPs that are persistent in the environment are known as "permanent POPs". POPs are not the only hazardous chemicals that can be persistent in the environment. Other chemicals, such as dioxins and furans, are also known as POPs. However, the term "POP" is often used to refer to all persistent hazardous chemicals that are persistent in the environment and pose a risk to human health and the environment.

In 1998, the Stockholm Convention on POPs was adopted. The Convention is the first global treaty to protect human health and the environment from POPs. The Convention is a legally binding treaty, which means that all countries that have signed the Convention are obligated to implement the provisions of the Convention. The Convention is an important mechanism for regulating the production, use, and disposal of POPs. The Convention includes a list of POPs that are prohibited or restricted, and it also includes provisions for the destruction or disposal of POPs that are already in the environment.

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Table 1: International Standards for decommissioning levels

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCDD/Fs</td>
<td>20 ppt</td>
<td>18,000 ppt</td>
</tr>
<tr>
<td>PCBs</td>
<td>0.5 ppt</td>
<td>1000 ppt</td>
</tr>
<tr>
<td>HCB</td>
<td>50 ppt</td>
<td>5000 ppt</td>
</tr>
</tbody>
</table>

Risk reduction: How to Eliminate POPs in waste?

The operation of many POPs waste facilities involves the following steps: the use or production of POPs, the generation of POPs waste, the disposal of POPs waste, and the destruction or disposal of POPs waste. The POPs waste is then transported to a disposal facility, where it is treated using various processes, such as incineration, landfilling, or destruction. The POPs waste is then disposed of in a way that is safe for the environment and human health.

Table 3: POPs waste in landfills

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>POPs waste storage capacity</th>
<th>POPs waste disposal capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>100,000 tons</td>
<td>50,000 tons</td>
</tr>
<tr>
<td>USA</td>
<td>150,000 tons</td>
<td>75,000 tons</td>
</tr>
<tr>
<td>Japan</td>
<td>200,000 tons</td>
<td>100,000 tons</td>
</tr>
</tbody>
</table>

References: