Pollutants

The more prominent persistent organic pollutants (POPs) are aldrin, chlordane, dichlorodiphenyl trichloroethane (DDT), dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene, polychlorinated biphenyls, dioxins, and furans.

These chemicals may have been intentionally produced for legitimate uses in agriculture as insect, pest and disease control or for use in manufacturing or industrial processes. Unintentional production can result from combustion or manufacture of chemicals. Although developed nations have been working at controlling pollutants for decades, developing nations have only recently started to restrict production, use and release of POPs. Alternatives to replace POPs for legitimate uses may be less widely available, more expensive or less effective, causing continued use.

People and animals are primarily exposed to POPs through contaminated food, but alternate methods of exposure can include contaminated drinking water or direct contact with the chemicals. Diets high in fish, shellfish, and wild foods high in fat are particularly susceptible. In animals, biomagnification can lead to higher levels of POPs in organisms higher in the food chain. POPs can be taken into the body by inhalation, ingestion, and dermal uptake. Biologically, POPs can cause reproductive, developmental, behavioral, neurologic, endocrine, and immunologic adverse health effects. Both people and animals can experience behavioral abnormalities or birth defects.

Opposing forces affect the long-term trends in exposure to POPs. Governmental initiatives at regulation have reduced or eliminated use of the chemicals. However, because the chemicals resist environmental degradation, bioremediation is slow. Additionally, the chemicals may still be in use in developing countries; they can be transported over long distances and can accumulate in the environment. Recovery of species sensitive to POPs, such as the bald eagle, might suggest that the threat of exposure has been decreasing over the past few decades.

Comments: This essay is very good. It addresses the guiding questions without reading like a series of answers. The paragraphs build upon one another to tell a story. Grammar, spelling and sentence structure are all very good. About the only negative is the lack of a good closing statement, though this was likely the result of shorter length restrictions I had imposed at the time (250 word max).