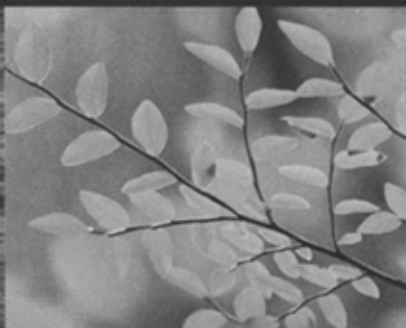
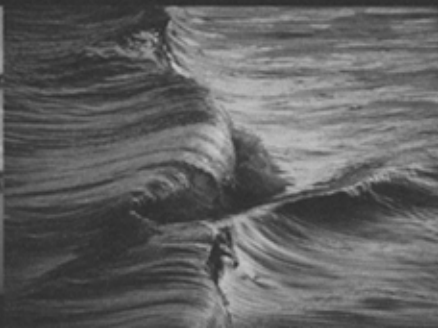




**DRUM
BEAT**
FOR MOTHER

EARTH

How Persistent Organic Pollutants Threaten the Natural Environment and the Future of Indigenous Peoples



GREENPEACE
Indigenous
Environmental
Network



“Indigenous Peoples are the environment and the environment is the soil of our Mother Earth. We are connected to every living species

ONE WITH MOTHER EARTH

Whether as Native Americans or First Nations, we are “indigenous” to these lands called Canada and United States. We are “peoples” that have collective rights within the hundreds of tribes that still exist today. We are “Indigenous Peoples” who have inherent rights to our traditional lands and we still maintain our culture and spiritual beliefs. Over 1,000 distinct Indigenous communities, reserves, villages and reservations or territories exist in both Canada and United States. These territories sustain us and when they are contaminated with chemical pollutants, our communities often suffer the most — because when the envi-



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ronment is polluted, Indigenous Peoples are polluted.

Indigenous knowledge teaches us how to walk upon our Earth Mother and to respect the sacredness of her creation. We use every part of our Earth Mother to sustain us in ceremony and in everyday life. We use the water for ceremony to purify and nourish our spirit and bodies. We depend on traditional foods and plants for ceremony and to nourish our communities. When our water, soil and air are poisoned with toxic chemicals, our rights to practice our traditional lifestyles and heritage and to live in a clean and safe environment are violated.

OUR SACRED RELATIONSHIPS

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Indigenous knowledge also teaches us our sacred relationship to the Ones-That-Swim, Ones-That-Fly, Ones-that-Crawl, and The-Four-Legged-Ones. These sacred relationships with plants and animals are embodied in our clan identities through our many traditions. Some of these species are endangered and some are polluted with high levels of toxic pollutants in their bodies. If these species are compromised, our clan identification could be endangered as well.

Indigenous Peoples — we are one and the same with the air, water and every living species is spiritually and culturally connected to us.”

— Tom Goldtooth, National Coordinator, Indigenous Environmental Network





What Are POPs?

The term POPs is short for persistent organic pollutants. POPs are long-lived chemicals that build up in the food chain and slowly poison animals and humans. POPs travel thousands of miles and enter the soil, oceans, rivers, plants, and animals far from where they are produced or used. Indigenous peoples who maintain a land-based culture can be heavily exposed to POPs from their diet. In this way, POPs threaten our culture and our future. The most well-known examples of POPs are PCBs (transformer fluids), DDT (a pesticide) and dioxin, an unwanted byproduct of manufacturing and one of the most toxic man-made substances known.

Historical tribal hunting and fishing rights are undermined by POPs contamination. What is the value of a right to fish if the fish are contaminated? Dioxin, PCBs, DDT and nine other chemicals are considered to be "a serious threat to human health" throughout the world by the United Nations. In fact, governments of the world are negotiating a treaty to remove them from the environment. It is critical that this U.N. treaty recognize the serious impacts POPs have on the future of Indigenous Peoples.

Where are POPs Found?

POPs are found in common places. Electrical transformers contain PCBs. Dioxins, furans and other POPs are created during the manufacture of paper and vinyl plastic, which is used to make children's toys, clothing, IV bags and tubing, flooring, pipes, and siding. When vinyl is incinerated or burned in a backyard trash fire, dioxin is formed again. Dioxins are also formed during the manufacture of magnesium and other metals. The POPs pesticides are no longer legally used in North America, but they are used in other countries. Since POPs do not easily degrade and can travel thousands of miles, they can still be found in soil, lakes, rivers, fish, animals, and people long after they are used.

Polluted Food

Indigenous Peoples have special cultural and spiritual relationships to traditional foods that create increased consumption patterns compared to non-Indigenous populations. Unfortunately, the main way POPs enter our bodies is through food. POPs have been found in eagles, cormorants, ducks, geese, caribou, reindeer, raccoons, rabbits, quail, deer, moose, bison, turtles, crocodiles, sheep, cows, polar bears, seals, whales, and fish. POPs accumulate in fat and their concentration increases at each step

of the food chain. For example, PCBs have been found to accumulate in the livers of sheep. In addition, dieldrin, a pesticide, accumulates in the wool of sheep that eat from contaminated land. Advisories prohibiting or discouraging the consumption of traditional foods affect Indigenous Peoples' right to practice our cultural and spiritual ways. Store-bought food does not solve the contamination problem, since it may also be contaminated.

In many areas of our Indigenous territories, our communities are being told not to eat the contaminated fish and animals. Advisories are being posted everywhere. According to a report by Health Canada, "Great Lakes residents who consume larger amounts of certain species of contaminated fish and wildlife than the general population are at an increased risk of exposure to toxic pollutants." The report names affected subpopulations that include anglers, their families, and Indigenous Peoples.

To Indigenous Peoples, fishing and hunting are not sport or recreation, but part of a spiritual, cultural, social and economic lifestyle that has sustained us from time immemorial. In some areas, fishing and hunting rights are treaty rights. When we no longer can eat fish and wild meat, high protein food is often replaced with junk food like potato chips and



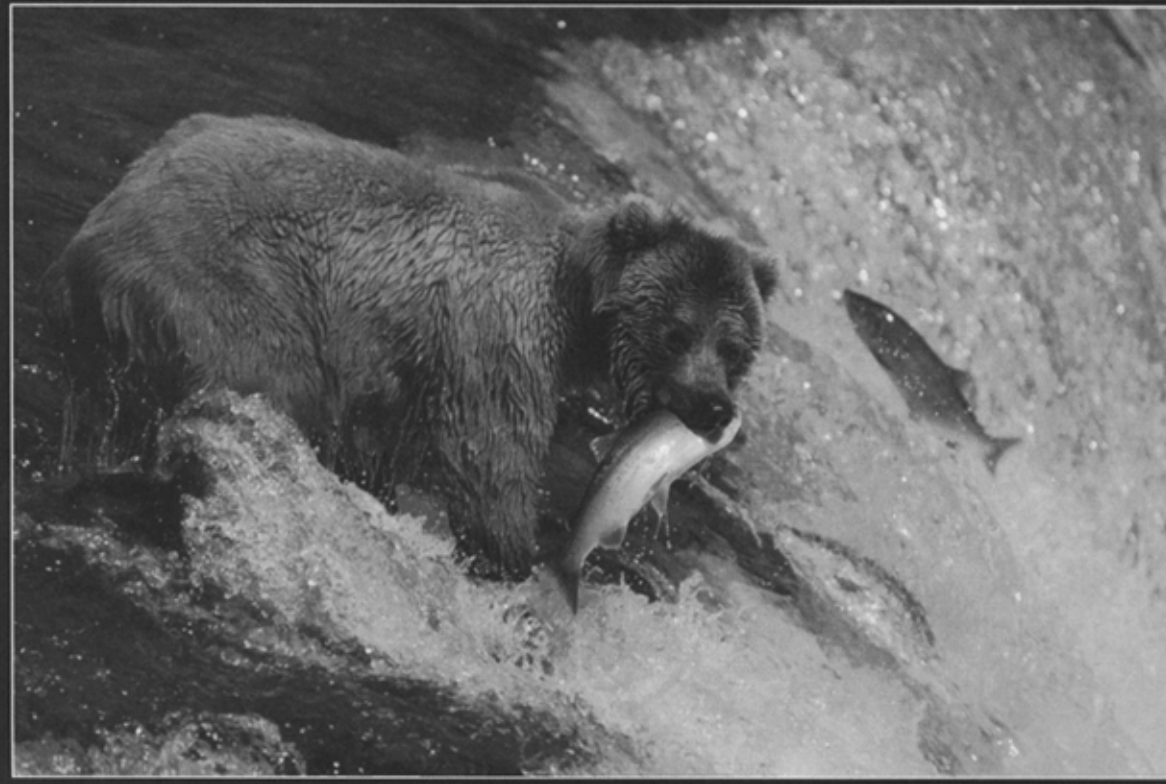
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Persistent Organic Pollutants (POPs) are chlorine-based chemicals that slowly poison humans and other animals. Most POPs are either pesticides or byproducts of industrial processes.

(pictured at far right)
Bagging wild rice.

The most intense concentrations of POPs are found in animal products, but plant foods can also be contaminated with POPs.





How POPs Build Up in the Food Chain

One example: when POPs from an industrial facility contaminate a nearby body of water, the fish who live there are contaminated also. (POPs build up in animal fat.) Many of these fish are eaten by a larger fish, who is eaten by a human. That human has unintentionally ingested the POPs that have built up at each step in the chain.

soft drinks. In addition, the active social part of harvesting of traditional foods is replaced by a less active lifestyle. The junk food diet is less healthy and has contributed to problems with obesity, high blood pressure and chronic diseases like diabetes. Cutting off traditional food supplies from Indigenous Peoples could be a form of cultural genocide.

Children Are Affected Most

Children are more vulnerable than adults to many kinds of pollution, and POPs are no exception. Toxic exposures during fetal development, infant life, and childhood can have life-long effects including increased susceptibility to

cancer, and damage to the immune and reproductive systems. These health effects may not be apparent until much later in life, making them difficult to link to early-life exposures. For example, a study of children whose mothers ate PCB-contaminated fish from the Great Lakes during pregnancy showed that they had lower intelligence and problems with reading comprehension. These damaging effects were still observed when the children were 11 years old. After birth, POPs can also enter children during breast feeding. Many POPs have been detected at significant levels in the breast milk of Mohawk and Inuit women as well as women from many countries worldwide. The average breast-fed baby in North America grossly exceeds the World Health Organization "acceptable" daily intake of dioxin.

We have a responsibility to our future generations to leave them the Earth as it was left to us. By threatening the health and survival of our children, POPs threaten our future generations.

(far left) Navajo children in Arizona. (below) Dezbah Evans, Yuchi / Diné.



The Warning From Animals

Indigenous Peoples have always warned about the dangers of chemicals to the animal, fish and bird nations. In recent years, scientists agree that POPs are the main cause of damage to several types of animals and birds. The continued local extinction of the Lake Ontario bald eagle results from exposure to PCBs and other POPs. The beluga whales of the St. Lawrence estuary



Manitou Island fisherman

How POPs Build Up in the Human Body

Almost everything we eat, drink, or inhale is broken down by our bodies and then expelled through the process of waste elimination. But POPs are different. The poisonous chemicals are stored in fat and build up in our bodies, like water in a stopped-up sink. As we age and are continually exposed to POPs, their concentration becomes higher, and their potential effects on our health become more serious.



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and the Alaskan Arctic are highly contaminated by a range of POPs and suffer from a high incidence of tumors and reproductive problems. Reproductive problems, deformities, and behavioral abnormalities in several species of mammals, birds, fish and reptiles in the Great Lakes basin have also been linked to POPs.

Finally, PCBs and dioxin are suspected to contribute to learning disabilities. According to the World Health Organization, "subtle effects may already occur in the general population in developed countries at current background levels." For Indigenous Peoples, the implications are even more serious since we are more highly exposed to these chemicals.

A Serious Health Threat to Humans

The pollution of the human body by POPs has occurred together with the appearance of several alarming trends in human health over the past few decades. There has been a precipitous rise in breast cancer, many studies showing dramatic drops in sperm counts and increases in other disorders of the reproductive organs. Numerous studies confirm the toxicity of different POPs to humans. In addition, scientists recognize that POPs can cause these health problems in animals that are commonly used to predict risk to humans.

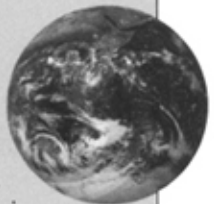
The U.S. Environmental Protection Agency estimates that exposure to dioxin in the U.S. population is near the levels at which damage to health is known to occur from studies of animals and humans. These health effects include growth and immune system problems, reduced sperm counts and menstrual disorders such as endometriosis. Dioxin is also internationally recognized as a known human carcinogen.

A Global Treaty Against POPs

Negotiating a Safer Future

The decision to start global intergovernmental negotiations on a legally binding POPs agreement was taken by the Governing Council of the United Nations Environmental Program in February, 1997, and endorsed by the World Health Organization in May, 1997. The treaty negotiations take place in a series of Intergovernmental Negotiating Committee (INC) meetings that the Governing Council of the U.N. plans to conclude by 2000.

What Chemicals Are Covered? The POPs chemicals currently included in the U.N. treaty negotiation are : PCBs, dioxins, furans, hexachlorobenzene and POPs pesticides, which include DDT, chlordane, heptachlor, toxaphene, aldrin, dieldrin, endrin, and mirex. The U.N. treaty will agree on a way to add other chemicals to this list.



Paper mills and trash incinerators are two sources of POPs pollution.

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ALASKAN ARCTIC

Pesticides and PCBs in the Arctic: Aleut, Athabaskan, Eyak, G'wichin, and Inuit Nations

POPs pesticides heptachlor, chlordane, and toxaphene have been found in the Arctic Ocean. DDT, PCBs, and hexachlorobenzene have been measured in sediment and fish in Arctic lakes. In 1997, blubber from four types of seals contained PCBs and DDT. The same year, measurements of beluga whales from the north coast showed toxaphene, PCBs, DDT, and chlordane in their blubber. DDT and PCBs have also been seen in narwhals, gray whales and polar bears. The impact on humans has been seen in children. Inuit children show increased susceptibility to infection as well as immune system abnormalities.

Communities facing critical threats from POPs chemicals

INDIGENOUS HOT SPOTS

NEW YORK

PCBs contaminate the Mohawk Nation

General Motors, Reynolds Metal, and ALCOA built factories upstream of the Mohawk Nation on the St. Lawrence River. PCBs discharged into the river contaminated water, fish, turtles, frogs, ducks, and breast milk. Until 1986, Mohawk children played in GM's landfill, because the company did not even put up a fence. PCBs are ranked by the EPA as being in the "top 10 percent of the most toxic chemicals to human health." New York has a statewide fish advisory warning people not to eat too many fish because of dioxin contamination.

OREGON

Dioxin and DDT in Columbia River Basin seafood: Umatilla, Nez Perce, Yakima, and Warm Springs Nations

Seafood is fundamental to Columbia River Basin tribal culture. DDT and PCBs have been measured in shrimp, flatfish, mollusks, and steelhead from offshore locations, estuaries, and rivers. In addition, PCBs, dioxins, and furans have been found in ospreys and their eggs from this river region. PCBs, dioxins and furans have also been observed in mink and otters. The U.S. EPA has estimated that populations that eat as much fish as the Columbia River Basin tribes face a serious cancer risk of 1 in a 1000 compared to the 'acceptable' risk of one in a million.

WISCONSIN

PCBs contaminate the Menominee and Oneida Nations

PCBs have entered the food chain of Menominee and Oneida tribal members. Paper mills have contaminated fish and birds on the Fox River with PCBs. Other contaminants are currently under examination. These tribal lands are now a proposed Superfund site.

MAINE

Dioxin contaminates the fish of the Penobscot Nation

Paper mills upstream of the Penobscot Nation have contaminated rivers and fish with PCBs and dioxin. Another mill discharges directly into reservation waters. The Maine Department of Environmental Protection found that dioxin concentrations in all fish samples downstream of paper mills in the Penobscot River exceeded the government's monitoring limit. The Penobscot Water Resources Department has also documented dioxin contamination in reservation waters. Dioxin is a known human carcinogen and has been called "the most toxic chemical known to science." The rate of cancer among Penobscot tribal members is twice the state average.

ACROSS TRIBAL LANDS

Burning trash creates dioxin

Trash burning on tribal lands is a potentially large source of dioxins. This is because PVC plastic (or vinyl) supplies chlorine; a necessary ingredient for dioxin formation. The EPA has measured large amounts of dioxin in experiments that imitate the burning of household waste in barrels as well as landfills.

The Principles of Environmental Justice

The "Principles of Environmental Justice" were adopted in 1991 by the participants of the People of Color Environmental Justice Leadership Summit. The first of the seventeen principles states, "environmental justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species and the right to be free from ecological destruction." In response, President Clinton issued an Executive Order in 1994 emphasizing that "all communities and persons across this nation should live in a safe and healthful environment."

Environmental Injustice

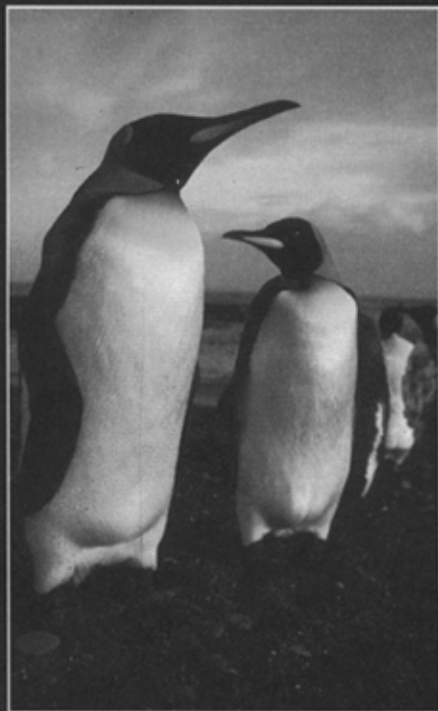
Our Indigenous Peoples in North America are being disproportionately harmed from persistent organic pollutants. Environmental racism exists in national and international policies that allow persistent chemicals to pollute the developing fetus and breast milk of Indigenous women and to potentially affect the sperm count of Indigenous men. Indigenous Peoples unjustly contaminated with POPs include:

- Yaqui farming communities of Mexico
- Mohawks of Akwesasne in the Great Lakes
- "River Peoples" of the Columbia River Basin in Washington and Oregon
- Inuit, Cree and Dene of Canada, and
- Alaska Natives.

We must educate ourselves on this issue and seek to eliminate persistent organic pollutants from the planet. Our future generations depend on our actions.

How POPs Travel Across the Globe

POPs can be found across the planet and in the body of every human alive. Several POPs have been shown to migrate towards colder regions by a "grasshopper effect" of repeated evaporation and condensation, which has made the Arctic and its Indigenous population one of the most contaminated zones. Even though developed countries have banned some POPs pesticides like DDT, they are often widely used in developing countries. In addition, developed countries still contain industries that produce POPs such as dioxin. These industries include waste incinerators and vinyl production.



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INDIGENOUS PEOPLES

What We Can Do

- 1 Avoid buying products made from vinyl plastic (PVC).** Some carry the recycling symbol with the symbol ♻ or the letter V. If a product's composition is not listed, contact the manufacturer before buying it. Ideally, choose more natural materials, but if you have to buy plastic, opt for polyethylene (numbers 2 and 4), polypropylene (5) or PET (1).
- 2 Avoid burning trash,** especially if it contains vinyl plastic containers (shampoo bottles, peanut butter jars, vegetable oils, lamp oils) vinyl food wrap or packaging.
- 3 Talk to your tribal, IHS, or urban health facility** and encourage them to purchase **non-vinyl medical products** such as IV bags and tubing.
- 4 Join in support with other non-governmental organizations** to call for the total **elimination of POPs.**
- 5 Ask your tribal representatives to call on the U.S. State Department** to take a total elimination platform within the U.N. treaty-making process.

Indigenous Environmental Network

P.O. Box 485 Bemidji, MN 56619
(218) 751-4967 www.alphacdc.com/ien

GREENPEACE

1436 U St. NW, Washington DC 20009
(800) 326-0959 • www.greenpeaceusa.org