International Actions to Protect Health and Environment: A Report from the Stockholm Convention on Persistent Organic Pollutants

Alaska Collaborative on Health and the Environment
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www.akaction.org

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Our mission:

To assure justice by advocating for environmental and community health. We believe everyone has a right to clean air, clean water and toxic-free food.

Core Values:

- Community right-to-know
- Environmental justice
- Precautionary principle
- Elimination of the production and release of toxics
- Rights and sovereignty of Indigenous peoples
- Culture of caring and wellness

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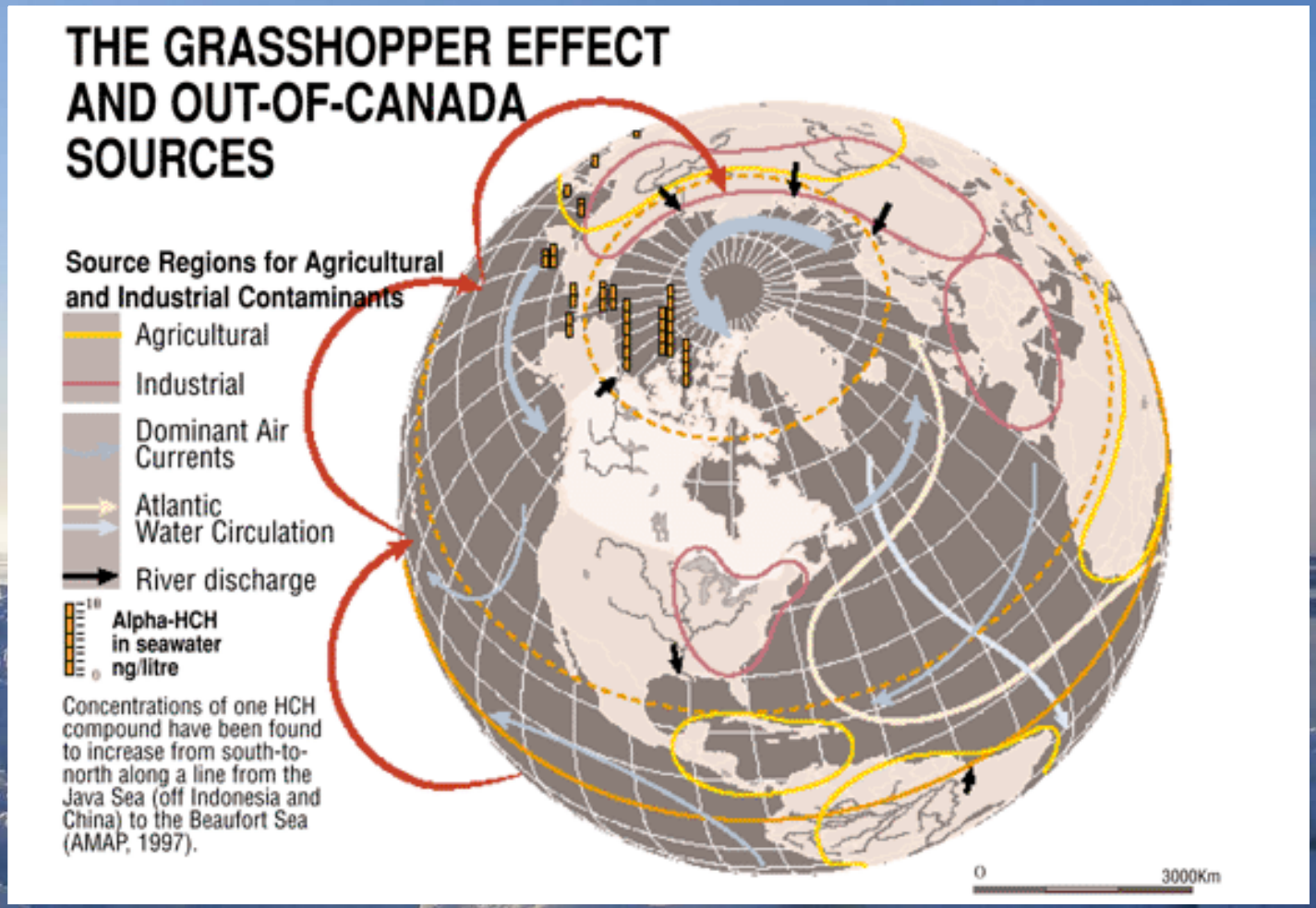
Global Transport of Persistent Chemicals into the Arctic



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Overview of U.N. Chemicals and Wastes Conventions

- **Basel Convention**—to address management, disposal, and transboundary movement of hazardous waste (entered into force in 1992; now 183 Parties)
- **Rotterdam Convention**—creates legally binding obligations for Prior Informed Consent Procedure (entered into force in 2004, now 154 Parties)
- **Stockholm Convention**—legally binding international agreement on persistent organic pollutants (entered into force in 2004; now 179 Parties)

The Language of the Stockholm Convention

- "Aware of the health concerns…in particular **impacts upon women and children and, through them, upon future generations."**
- "Conscious of the need for **global action**…"
- "Acknowledging that **precaution underlies the concerns of all the Parties and is embedded within this Convention…"**
- "Determined to **protect human health and the environment…"**
- "Acknowledging that the **Arctic ecosystems and Indigenous communities are particularly at risk...**"

Stockholm Convention Milestones

- February 1997—UN Environment Program establishes intergovernmental negotiating committee (INC)
- May 2001—92 countries and EC sign the global legally-binding treaty
- May 2004—the Convention enters into force
- May 2009—Fourth Conference of the Parties (COP4)—nine new chemicals added
- May 2011—Fifth Conference of the Parties (COP5)—endosulfan added for global elimination
- April 2013—Sixth Conference of the Parties (COP6), HBCD added for global elimination—179 Parties (Not U.S.)

New POPs—Recommendations of the POPS Review Committee

The Process for Listing a POP

The POPRC reviews proposals submitted by Parties in accordance with Article 8 in <u>three stages:</u>

- **<u>1) Annex D—Screening</u>**
  - Persistence, Bioaccumulation, Long-range transport, Adverse Effects
- **<u>2) Annex E—Risk Profile—Assessment of Properties</u>**
  - ***"lack of full scientific certainty shall not prevent the proposal from proceeding…"***
- **<u>3) Annex F--Prepare Risk Management Evaluation</u>**

  Socio-economic considerations and Alternatives

- **Recommend to COP to consider listing**
- **COP makes a decision**

Recommendation of the POPRC to list three new POPs

- **Chlorinated naphthalenes (CNs)**
  - No longer intentionally produced or used
  - Historical uses included wood preservation, additives to paints and engine oils, capacitors, cable insulation
  - Unintentionally produced in combustion and other industrial processes
- **Hexachlorobutadiene (HCBD)**
  - Mainly a by-product of chlorinated solvent manufacturing
  - No intentional uses are known
  - Historically used as a solvent, transformer fluid, insecticide
- **Pentachlorophenol (PCP or "penta")**
  - Historically used as biocide, insecticide, fungicide, disinfectant, defoliant, anti-sapstain agent, anti-microbial agent and wood preservative
  - Now primarily used as a pesticide for wood preservation, especially utility poles

POPRC and IPEN Recommendations

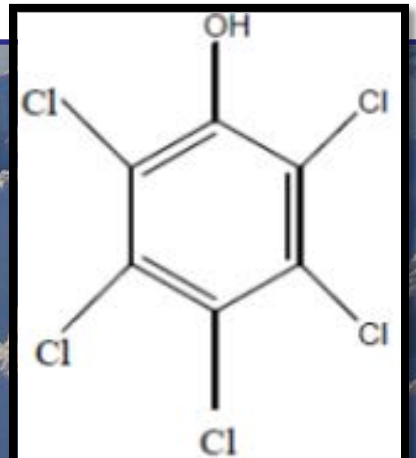
- **Chlorinated Naphthalenes (CNs)**
  - POPRC proposed listing of di-, tri-, tetra-, penta-, hexa-, hepta-, and octa-chlorinated CNs in Annex A (with no specific exemptions) and Annex C
  - IPEN supported the recommendation of the POPRC
- **Hexachlorobutadiene (HCBD)**
  - POPRC proposed listing under Annex A—noting listing without exemptions would be the most efficient control measure; and also listing in Annex C
  - IPEN supported the recommendation of the POPRC
- **Pentachlorophenol (PCP or "penta")**
  - POPRC proposed listing under Annex A with possible allowance for time-limited exemption for production and use for utility poles and crossarms
  - IPEN supported listing in Annex A with no exemptions

Adverse Effects of CNs and HCBD

- Chlorinated naphthalenes (CNs)
  - Dioxin-like mechanisms of toxicity; similar in structure to PCBs
  - Endocrine effects at low concentrations
  - Transported to the Arctic; bioaccumulate in fish, birds, marine mammals
- Hexachlorobutadiene (HCBD)
  - Cancer-causing and kidney toxicant
  - Chromosomal damage in workers
  - Found in Arctic air and animals
  - Highly toxic to fish

Pentachlorophenol (PCP)

- Pesticide primarily used now for wood treatment of utility poles in U.S. and Canada
- Dow and Monsanto first introduced PCP in 1936
- KMG Chemicals is currently the only producer of wood-treating PCP in the world with production in Matamoros, Mexico and formulation in Tuscaloosa, Alabama
- Banned in many countries due to high toxicity and harm to health
- Proposed as a POPs candidate by the European Commission in 2011
- ``*PCP its salts and esters are likely, as a result of their long-range environmental transport, to lead to significant adverse human health and environmental effects such that global action is warranted* (Decision POPRC-9/3). ``



Pentachlorophenol—a global contaminant affecting the Arctic

- PCP detected in air, water, and soil throughout the world, as well as in the blood, urine, seminal fluid, breast milk and adipose tissue of humans (Zheng et al. 2011)
- PCP was one of the dominant organic contaminants within a representative population of women in Norway (Rylander , 2012)
- Elevated concentrations of PCP are detected in humans throughout the Arctic (AMAP, 2014)
- PCP is the dominant chlorinated phenolic compound in Inuit blood samples from Nunavik, Arctic Canada. The researchers noted that PCP may supercede HO-PCBs as the chlorinated compound of highest concern in humans (Sandau et al. 2002)
- PCP in blood plasma of the Indigenous Chukotka people of the Russian Arctic. The median PCP level was measured at 642 pg g(-1) plasma (Sandanger et al. 2004)

Pentachlorophenol and health

- **Exposure to PCP is associated with reproductive and developmental toxicities, immunodeficiency, interference with thyroid and reproductive hormones, and increased risk of non-Hodgkin lymphoma.**
- **Neurodevelopmental effects in children—prenatal exposure to PCP correlates with worse coordination, less sensory integrity, worse attention, and worse visuomotor integration in children at school age. PCP correlated with lower levels of thyroid hormone. Based on their results, the researchers concluded that "*unrelenting efforts should be made to find safe alternatives for these compounds* (Roze et al. 2009)."**
- **U.S. National Toxicology Program September 2014 Report on Carcinogens, recently re-classified PCP "as reasonably anticipated to be a human carcinogen."**
- **Dioxins and furans are inevitable by-products of manufacturing and use.**

Poison Poles

- Significant source of dioxins and furans
- Contaminates soils and groundwater
- Case study—Long Island, NY found levels of PCP up to 250,000 micrograms per kilogram
- Children not protected
- Hazardous waste

PCP-Treated Utility Pole Next to North Star Elementary School, Anchorage, AK, USA, Photo: April 2015

Safe, non-chemical alternatives readily available

- **naturally resistant hardwoods, concrete, steel, fiberglass reinforced composite, underground lines**
- **non-chemical alternatives to utility poles require less maintenance and have a longer service life**

Chemical industry representation for pentachlorophenol

Indigenous and NGO Groups Have Vital Role in Stockholm Convention

Protecting Health and Human Rights—Health, Well-being and Food are Human Rights

- **Everyone has the right to a standard of living adequate for the health and well-being of himself & of his family…including food…"—*Universal Declaration of Human Rights***
- **"…In no case may a people be deprived of its own means of subsistence."***--Article 1 in Common, International Covenants on Civil and Political Rights and on Economic, Social and Cultural Rights*
- **"States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of Indigenous Peoples without their free, prior, and informed consent."—*Article 29 of the UN Declaration on the Rights of Indigenous Peoples***
- *"Particular attention shall be paid to the rights and special needs of Indigenous elders, women, youth, children, and persons with disabilities in the implementation of this Declaration." Article 22 of the UN Declaration on the Rights of Indigenous Peoples*

Indigenous Delegation to the Stockholm Convention Conference of Parties—Geneva

Mission: a toxics-free future for all

…achieving a world in which chemicals are no longer produced or used in ways that harm human health and the environment, and where POPs and chemicals of equivalent concern no longer pollute our local and global environments, and no longer contaminate our communities, our food, our bodies, or the bodies of our children and future generations

IPEN
a toxics-free future

IPEN Leadership

Co-Chairs
Executive Committee
Steering Committee
Regional Hubs
Secretariat
Thematic Working Group Co-Chairs/ Coordinators

Africa	Arab	Asia-Pacific	C/E Europe	Latin America	US	W. Europe
Cameroon	Lebanon	Bangladesh	Belarus	Chile	Alaska	France
Ethiopia	Tunisia	Cook Islands	Czech Rep.	Mexico	California	Germany
Tanzania		India	Russia			Switzerland
		Indonesia				Sweden
		Philippines				

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a toxics-free future

IPEN Impact & Accomplishments

Major Decisions at the Stockholm Convention COP 2015

- Listing of HCBD in Annex A with no exemptions
- Listing of chlorinated naphthalenes in Annexes A and C time-limited exemption requested by Russian Federation
- Listing of pentachlorophenol in Annex A with time-limited exemption
- Over 50 decisions from the joint COPs of the Stockholm, Rotterdam, and Basel Conventions (held May 4-16, 2015)

Resources

- Alaska Community Action on Toxics www.akaction.org
- International POPs Elimination Network www.ipen.org
- International Indian Treaty Council: www.iitc.org
- Inuit Circumpolar Council www.inuitcircumpolar.com
- Safer Chemicals Healthy Families www.saferchemicals.org
- Center for International Law www.ciel.org
- Stockholm Convention www.pops.int

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