



IISD/ENB - Mirra Worth

No More Minamatas

GLOBAL MERCURY EMISSIONS HAVE RISEN BY A STAGGERING 20% OVER THE LAST 5 YEARS WITH NO REDUCTION IN SIGHT. IF WE ARE GOING TO CURB MERCURY POLLUTION, WE MUST END THE GLOBAL MERCURY TRADE.

What happened in Minamata?

For thirty years, the chemical company Chisso Corporation negligently dumped its mercury-laden wastewater into the Minamata Bay of Japan. Many people in communities surrounding the bay became ill with unusual neurological symptoms. As the mercury became bioavailable, fish became contaminated with mercury, thus poisoning people, who relied on a fish protein diet. Minamata disease was not officially recognized to be caused by industrial pollution from methyl mercury until 1968. Victims organized to force Chisso and the government to take responsibility for this massive environmental health catastrophe. The photojournalism of Eugene and Aileen Smith intimately captured the tragedy and brought global attention to the industrial crime and the impacted families when the photos were published in LIFE magazine in 1972 and as the book *MINAMATA* in 1975.

The Fossil Fuel and Gold Industries are the Leading Industrial Polluters of Mercury

Were the victims recognized and compensated?

Surviving victims of mercury poisoning from Minamata Bay are alive today. Many people were affected when they were developing in utero and their mothers ate mercury contaminated fish. Most of the 200,000 people living in the polluted area at the peak of the pollution were never recognized by the government and many not have received compensation, despite having symptoms. It has now been 64 years since the official discovery of Minamata disease, but government authorities still refuse to undertake a health survey. Multiple lawsuits are ongoing, with victims fighting for recognition and relief. Victims and supporters are negotiating intensely with the Minister of the Environment to end Japanese government stonewalling and are promoting international efforts at the UN to prevent more Minamatas.

The struggle for justice in Minamata and the struggle of communities around the world against polluting industries continues today.



W. Eugene Smith and Aileen M. Smith

Effects of Mercury Pollution

Mercury is a persistent and highly toxic substance. It is so toxic in fact that mercury exposure can cause severe brain damage, kidney and cardiovascular system damage, and even death at very low levels. Just 1 part per million (ppm) of mercury exposure is associated with a **0.18 decrease in IQ level**. The most dramatic harm takes place when expectant mothers are exposed to mercury, because mercury's most potent neurological impacts occur during fetal development.

What are the greatest threats of Mercury Pollution today?

The fossil fuel industry and gold industry are among the leading industrial polluters of mercury. Here are the top threats of mercury pollution and exposure:



Coal-fired Power Plants: The fossil fuel industry is responsible for climate change as well as mercury pollution. In addition to greenhouse gases, coal-fired power plants release mercury-laden emissions into the air that contaminate water ways and oceans, and accumulate in fish. Oil and gas extraction facilities and refineries likewise release mercury pollution into the air, land, and oceans.



Artisanal Small-scale Gold Mining (ASGM): Gold mining with mercury is an extremely hazardous process that sickens miners, their families and communities, and deprives their children of a future. Miners use mercury to extract gold from the soil, and it is often women who mix mercury with ore and then burn amalgams in their kitchens or yards. The mercury vapor released when an amalgam is heated (separating the mercury from gold) is highly toxic. According to the **United Nations Environment Agency**, approximately 15 million people in over 70 countries engage in small-scale gold mining for their livelihood—practices that mainly use mercury.



Local Contaminated Industrial Sites, including chlor-alkali plants (industrial chlorine production), release mercury to soil, water, and air.

How is Mercury Pollution connected to the current Climate Crisis?

Mercury from coal-fired power plants is a pollution twin to greenhouse gases. Mercury in coal ore is vaporized as coal burns. Atmospheric mercury travels over long distances before falling back to earth. Often it falls into oceans where bacteria transform it into highly toxic methylmercury. Methylmercury moves up the food chain and biomagnifies as larger fish eat smaller ones. Mercury contamination in fish has forced health agencies to issue advisories for fish consumption—especially for pregnant women. Women living in areas dependent on a diet high in fish protein, such as the people of many small island nations, have **higher levels of mercury in their bodies**—levels that can affect fetal development. Mercury deposits are also **frozen in the arctic permafrost**. As the planet heats up, unsustainable amounts of mercury will be released into the atmosphere.



Larry C. Price, Pulitzer Center on Crisis Reporting

ASGM communities suffer the impacts of mercury pollution today.

How Can We End Mercury Pollution?

The **Minamata Convention on Mercury** entered into force in 2017. Ratified by **114 countries**, including the US, the treaty was intended to reduce globally rising levels of mercury pollution to protect human health and the environment. Unfortunately, far from shrinking toxic mercury, global mercury emissions have **risen by a staggering 20%** over the last 5 years with no reduction in sight.

Extensive lobbying by powerful energy and gold industry groups weakened the treaty. **To end mercury we must curb coal-fired power and ban global mercury trade.**