



HUMAN
RIGHTS
WATCH

MERCURY: A HEALTH AND HUMAN RIGHTS ISSUE

Towards a Global Treaty on Mercury



After a day of illegally panning for gold in the mine's tailings, a young boy is covered with residue from the liquid mine waste.

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MERCURY IS ONE OF THE GREATEST TOXIC THREATS TO HUMAN HEALTH.

In 2013, governments around the world will adopt a global, legally binding treaty on mercury. Negotiations around the treaty started in 2010 and have now entered the crucial, final phase of negotiations.

Human Rights Watch calls upon governments around the world to make this a strong treaty that protects the human rights of adults and children around the globe – in particular the right to health, and the right to safe food and water.

MERCURY: HEALTH IMPACT

Mercury is a toxic substance that attacks the central nervous system. It can cause life-long disability and, in extreme cases, death. Mercury can reach the body through inhalation, ingestion, and skin contact. Infants can be exposed through breast milk and fetuses can be exposed to mercury in utero.

Children are particularly susceptible to the harms of mercury poisoning because their bodies are still developing. There is no known safe level of exposure.

Mercury exposure can harm:

- the central nervous system
- the cardiovascular system, kidneys, lungs, and gastrointestinal tract
- the immune system
- women's reproductive health

Women, engaged in illegal mining, search for ore bearing rock near the tailings discharge point. A ton of ore bearing rock yields only a tiny amount of gold and the remaining material is processed into tailings.

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MERCURY: ARTISANAL GOLD MINING

At least 13 million people work in the artisanal mining sector worldwide. Artisanal and small-scale gold mining, mining done with basic tools in the informal sector, is one of the largest sectors for mercury demand in the world. The men, women and children who work in this sector use mercury to extract gold from rock ore. They grind and crush rock ore into a sandy mix, then add mercury, which binds to the gold, creating an amalgam. They then heat the amalgam to evaporate the mercury and separate out the gold. While there are other methods of extracting gold from ore, mercury is inexpensive, easy to access and easy to use.

There are an estimated 1 million children working in the mining sector worldwide. In artisanal gold mining, children are often assigned to work with mercury because it is considered easier work for small children.

Virtually all the mercury that is used in artisanal mining is released into air, rivers, and soil, posing a serious health risk for adults and children working in mining, communities living near mines, and for populations globally. Although harm from mercury in artisanal mining is a problem around the world, governments have done little to protect miners, including children, from the harms of mercury exposure.



Trespassers stand in the flow of the mines' liquid waste in the hope of benefiting from illegal mining. PJV produces roughly six million tons of liquid tailings every year and discharges them into the nearby Porgera river.

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INTERNATIONAL HUMAN RIGHTS OBLIGATIONS AND THE ENVIRONMENT

Governments are already obligated to protect the health of their citizens through a number of different international laws and treaties.

The **International Covenant on Economic, Social and Cultural Rights** requires signatories to protect the highest attainable standard of health for its citizens. The right to health extends not only to timely and appropriate health care, but also to access to safe and potable water, an adequate supply of safe food, healthy occupational and environmental conditions, and access to health-related information and education. In particular, States have the obligation to improve environmental and industrial hygiene, including through the prevention and reduction of the population's exposure to harmful substances such as harmful chemicals.

The **Convention on the Rights of the Child** calls on signatories to ensure to the maximum extent possible the survival and development of the child, and to realize the child's right to health.

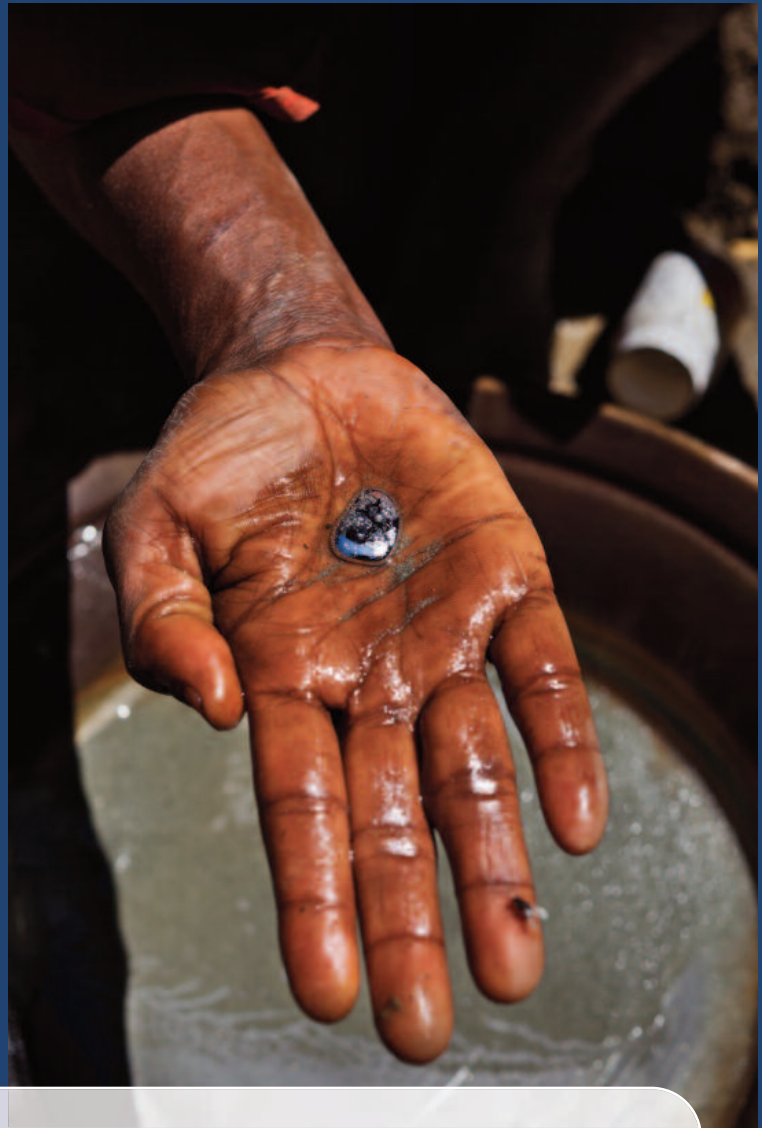
The Convention on the Rights of the Child and the **International Labour Organization Convention 182** also seek to protect children from the worst forms of child labor—work that is likely to be hazardous or harmful to the child's health or physical, mental development. The worst forms of child labor specifically include work that exposes children to hazardous substances.

Current international treaties do not specifically mention mercury, but generally mention environmental threats. The mercury treaty negotiations present an important opportunity to strengthen and specify human rights protections in relation to mercury and its specific uses and health threats. More broadly, the treaty also presents an opportunity to integrate human rights and environmental law. Environmental degradation, such as contaminated land, water and air, has a negative impact on people's ability to realize their basic human rights. Around the world, environmental conditions

have resulted in the denial of the right to life, health, livelihood, participation, education among others. Recognizing that environmental degradation threatens these fundamental human rights that governments are obligated to protect is critical in holding governments accountable and ensuring that these rights are realized.

The method small scale miners around Porgera usually employ to process ore bearing rock is to crush it into a dust, wash as many undesirable rock particles out of the dust as possible, and then pour mercury into the remaining material. The mercury binds to any gold present in that material, creating a gold mercury amalgam that excludes everything else. Miners then cook this amalgam over an open flame, causing the mercury to turn into vapor and escape into the air. The miners are left with pure gold, which they can sell on the open market.

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THE INTERNATIONAL MERCURY TREATY

In 2009, governments decided to develop a global legally binding instrument on mercury. Negotiations started in 2010, under the purview of the United Nations Environment Program (UNEP). The two final rounds of negotiations are set for Uruguay (June-July 2012) and Switzerland (January 2013). Once the treaty is adopted, it will be subject to ratification.

The treaty deals with a wide range of issues, including mercury supply and trade, mercury in products and processes, mercury in artisanal and small-scale gold mining, emissions, mercury storage and waste, as well as information and health policies. These issues are addressed in separate sections. Several other sections deal with issues of implementation, including financial resources.

Human Rights Watch's recommendations for this treaty are focused on section F, Artisanal and Small Scale mining, as well as section J, which focuses on public health generally.



RECOMMENDATIONS TO GOVERNMENTS

Governments around the world should ensure that the treaty on mercury is firmly grounded in human rights law. The treaty should include strong health protections against mercury, including comprehensive health strategies for adults and children. In relation to artisanal gold mining, the treaty should oblige States to implement comprehensive health strategies for artisanal gold miners and their communities, and specifically children and women who are pregnant and breastfeeding. The treaty should also require states to end the use of mercury by children and to reduce, and where possible eliminate, the use of mercury in artisanal gold mining.

TREATY OBLIGATIONS ON ARTISANAL AND SMALL-SCALE GOLD MINING (*section F*):

Mandatory national action plans

- Mandatory national action plans. In order to make the treaty effective, it is vital that the governments of all nations where there is artisanal gold mining are legally obliged to carry out specific measures with regards to mercury. If national action plans are voluntary, unwilling governments can refuse action without any consequence.
- Such action plans must include specific measures to reduce, control, and ultimately eliminate mercury in artisanal gold mining. These should include a ban on the worst practices of mercury use in gold mining:
 - children and women who are pregnant and breastfeeding working with mercury,
 - amalgamation in residential areas,
 - whole-ore amalgamation
 - mixing of mercury and cyanide.

Measures should include the introduction of retorts—containers that capture the mercury vapor and thus reduce emissions. In addition, measures should also include steps to develop and introduce mercury-free technologies, such as direct smelting. In order to make the action plans effective, target dates of 10 years or less should be set for the complete phase-out of mercury in the artisanal mining sector.

- Action plans must include a prohibition on the use of mercury by children and outline specific strategies to implement this prohibition, including legislation, enforcement, awareness-raising, improved access to education, and programs to withdraw children from artisanal mining work altogether.
- Action plans must outline strategies to end the use of mercury by pregnant and breastfeeding women and women of childbearing age, including legislation, enforcement, awareness-raising, and improved access to education, and programs to assist women miners with task-shifting.
- The action plans must contain public health strategies to address the health effects of mercury on artisanal miners and communities, including gathering of health data, training for health care workers, awareness-raising including through health facilities, and testing and treatment of mercury-related illnesses where possible.
- Action plans can only be effective if key stakeholders, such as community members, healthcare workers, and government officials at all levels are included in their development and implementation of these plans., Governments should work with these stakeholders in setting clear targets and timelines for implementation.

TREATY OBLIGATIONS ON PUBLIC HEALTH GENERALLY (*section J*):

- Promote awareness about the impacts of exposure to mercury on human health, as well as the measures to prevent exposure.
- Introduce systems for data-gathering and surveillance on the use of mercury and its impact on human health, including on children.
- Promote research on the use of mercury and its impact on human health, including children.
- Train health care workers on the health effects of mercury, including in awareness-raising on the risks of mercury use and in best practices to address mercury-related illness and health impacts.
- Develop specific protocols for the care of populations exposed to mercury at the primary and secondary care levels within public health system.
- Establish or improve capacity for laboratory and clinical diagnosis of mercury poisoning.
- Ensure adequate access to mercury-related testing and treatment for populations exposed to mercury.
- Monitor health in the work place effectively.
- Ensure there are sound laws and regulations in place regarding worker's safety and health, with a clear prohibition on child labor.

GENERAL PRINCIPLES REGARDING THE TREATY:

- The treaty should be explicitly based in international human rights law, with particular reference to the right to the highest attainable standard of health care, the right to life, and the child's right not to be subjected to worst forms of child labor.
- The treaty should have a strong monitoring mechanism to monitor compliance.

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(front cover) Small scale miners around Porgera,
Papua New Guinea Highlands.

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