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ENDING MERCURY POLLUTION: THE NEED TO STRENGTHEN THE MERCURY TREATY

The negotiation of the Minamata Convention resulted in two significant weaknesses in the Convention's implementation: the ongoing trade in mercury and allowing mercury to be used in artisanal and small-scale gold mining (ASGM).

The Treaty needs to be strengthened with amendments that:

- **End the legal global mercury trade, and**
- **Establish a phase-out date of 2032 for the allowable use of mercury in artisanal small-scale gold mining (ASGM)**

The current situation, in which mercury use in ASGM is allowed under the Convention, has resulted in most of the international trade in mercury (Hg) being diverted to use in ASGM. Once it has been used to extract gold, most of the mercury is released into the environment, contaminating the food chain, contributing to global mercury pollution, and causing widespread human mercury exposure and health impacts, especially among vulnerable populations such as Indigenous People in Latin America.

For the Minamata Convention to be assessed as effective, a decrease in the amount of mercury traded globally as a commodity and the use of mercury in ASGM since the Convention's entry into force should be found. However, the data show that neither of these trends have occurred.

According to the most recent data available, in 2017, 1200 tonnes of mercury were legally traded globally. In 2022, five years after the Convention took effect, 1700 tonnes of Hg were traded, a 40% increase in global mercury trade. While it is true that the mercury trade declined from 3500 tonnes in 2013 (the signing of the Convention) to 1200 tonnes in 2017, most of this decline can be attributed to the phase-out of products and industrial processes using mercury, thereby reducing mercury demand.

However, despite most major industrial demand for mercury now being phased out, the mercury trade is rising steeply. Coincidentally, the price of gold has steadily increased since 2017, suggesting that ASGM has become the prime source of global mercury demand. This is supported by data from the Global Mercury Assessment 2018, indicating that the amount of mercury used in ASGM (legally and illegally sourced) in 2017 was around 2059 tonnes. Five years later, the UNEP Draft Report on Mercury Trade, Supply and Demand (2023) noted that 2094 tonnes of mercury were used in ASGM.

While this shows a slight increase in mercury used in ASGM, the uncertainty in estimates suggests the amount of mercury used in ASGM has probably remained approximately the same (or perhaps increased) but has certainly not decreased.

When these trends in mercury trade and mercury use in ASGM are considered, it appears the Minamata Convention needs to be more effective in these critical areas and changes to the Convention are necessary to make it more effective.

Ending the trade in mercury

The first amendment to the Convention should end the global trade in mercury, with an exemption for mercury being sent for environmentally sound storage and/or disposal. Many Parties were reluctant to ban mercury exports altogether during the Treaty negotiations, as numerous products and industrial processes still required mercury. Since the Treaty was signed, most products requiring mercury have been phased out or will be phased out in 2025. An exception is dental amalgam, which is being phased down in most countries and was estimated in 2014 to consume 270–348 tons of mercury annually worldwide. Furthermore, the EU, which previously used 70 tons of mercury annually for dental amalgam, has now phased out dental amalgam.

Similarly, most industrial processes requiring significant amounts of mercury have been phased out, except for several chlor-alkali plants and a few Vinyl Chloride Monomer (VCM) plants. Nearly all VCM plants are located in China and use around 80% of domestic-mined mercury supplies to meet the industry's demand for 800+ tonnes of mercury per year. China has its own mercury mines, so it does not rely on the global mercury trade to supply its mercury needs for VCM or any other use. However, China has recently been using more efficient catalysts in the VCM process and lowered the consumption of mercury to some extent. Non-mercury catalysts are now also available.

When the total demand for mercury in products that have not been fully phased out yet (such as dental amalgam) is considered, the residual global demand probably amounts to 100-200 tonnes of mercury globally. Domestic mercury supplies from non-ferrous metal mining, oil and gas byproducts, waste treatment, recovery from end-of-life mercury-containing products, etc., could meet most of this demand, which amounts to a few tonnes per country per year.

In a relatively short time, dental amalgam should be phased out and substitutes made widely available, resulting in negligible global mercury demand for such products. The remaining few mercury-based chlor-alkali plants are required to cease mercury use by January 1, 2025 - though some may seek short extensions to this deadline. When all of this is considered, the only significant demand for mercury will be from ASGM, the world's primary source of mercury pollution today.

Establishing a phase-out date for mercury use in ASGM of 2032

The second major weakness of the Minamata Convention is allowing the use of mercury in ASGM without a phase-out date. This signals to the international community that mercury use in ASGM should be tolerated indefinitely and that efforts to end its use should be voluntary and determined at a national level through NAPs. Unlike all other uses of mercury identified by the Treaty, ASGM is the only use with no phase-out date or even phase-down targets. This is because particular interests want gold production rates maintained even when using highly toxic mercury and releasing it into the environment.

Many small-scale gold miners illegally extract gold with mercury from protected environmental areas and the territory of Indigenous Peoples, where industrial or large-scale mining is prohibited. The amalgam is purified by miners in illegal smelters owned by unlicensed gold buyers to produce gold doré. Later, the gold is mainly smuggled out of the country, depriving the national government of valuable resources and royalties and undermining national security.

This is gold that could not otherwise be accessed by industrial gold miners or gold dealers and remains a profitable enterprise. In some cases, gold bars from illegal mining sites with fake stamps were traded in Switzerland, Venezuela, and Indonesia. This illegal gold laundering relies on the mercury trade and small-scale gold miners.

Ending small-scale gold mining as an allowable use of mercury would support governments in protecting sensitive areas and national security, reduce illegal gold smuggling, and increase the protection of Indigenous Peoples and the broader community at risk. Moreover, support for national bans on mercury import and mercury use in mining reduces the risk of mercury pollution at the national, regional and global levels. Licensed small-scale gold mining can continue with non-mercury-based gold extraction methods.

IPEN proposes establishing a mercury phase-out date for ASGM by 2032, as this year coincides with the phase-out date in the Mercury Treaty for all primary mercury mining. This way, Parties with National Action Plans (NAPs) for mercury reduction in ASGM have a concrete mercury phase-out deadline to achieve. They can update their NAPs with plans to accelerate their mercury phase-out programmes and introduce non-mercury gold extraction methods. The funding support they receive to implement NAPs will continue as usual.

One crucial aspect of prohibiting the international trade in mercury and ending mercury use in ASGM is that customs officers will no longer have to decide whether mercury shipments are destined for an allowed (legal) use or are illegal or mislabelled. All shipments of mercury crossing a border (other than those destined for disposal) will become unlawful, can be confiscated, and must be sent to be stabilized and disposed of. This will significantly reduce mercury diversion to ASGM and make detecting mercury smuggling much easier. The Minamata Secretariat should provide guidance on confiscating and storage of the confiscated mercury when these amendments come into effect.

In addition to international trade, domestic trade through e-commerce platforms must be curbed and prohibited. Global e-commerce platforms and social media marketplaces such as Amazon, Lazada, Shopee, Alibaba, Facebook, Instagram, and other trading platforms operating in many countries are not allowed to facilitate or accept mercury traders. This should be extended to all social media and shopping platforms. A guide to detection and reporting mercury trade in e-commerce and the social media marketplace must be developed. Additionally, a model law should be introduced to guide Parties in establishing laws and regulations prohibiting such mercury trade within their countries.

Furthermore, Parties must also develop their country's interim mercury storage to support ending the mercury trade. The storage should be able to secure confiscated mercury, equipped with a mercury vapour sensor, safety and security measures, and follow the international standards. The Basel Convention's requirements for transboundary movement of hazardous waste should be applied for countries without final disposal sites or mercury stabilisation facilities. This would require that no mercury could be sent to countries that have no capacity to manage mercury waste. However, these countries would be able to ship their mercury waste to other countries that do have such facilities, with Prior Informed Consent procedures followed.

End the global mercury trade: phase out mercury in ASGM!

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