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# Mercury Activities in the GEF

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# Mercury Properties

Mercury is the only metal that exists in liquid form at room temperature and.



Mercury occurs naturally in the environment. It is rarely found in pure form, but rather in compounds such as inorganic salts: i.e. mercuric chloride, (HgCL<sub>2</sub>), mercuric sulphide (HgS) or alloys with other metals such as **gold**, silver and tin.

Mercury can be extracted by heating cinnabar in a current of air and condensing the vapor.

*The equation is:  $HgS + O_2 \rightarrow Hg + SO_2$*



# Mercury Toxicity

- Mercury, once released, like persistent organic pollutants (POPs), persists in the environment where it circulates among air, water, sediments, soil and biota in various forms. ([Mercury Emission Pathways](#))
- Mercury is a neurotoxin. Exposure to elemental mercury and mercury vapors may pose significant health risks including kidney, heart, and respiratory problems, tremors, skin rashes, vision or hearing problems, headaches, weakness, memory problems, and emotional changes.

## Minamata Disease

First identified in 1956, the photo on the right is from a TIME report in 2010 on the status of victims.



# Mercury Use and Emission (2008)

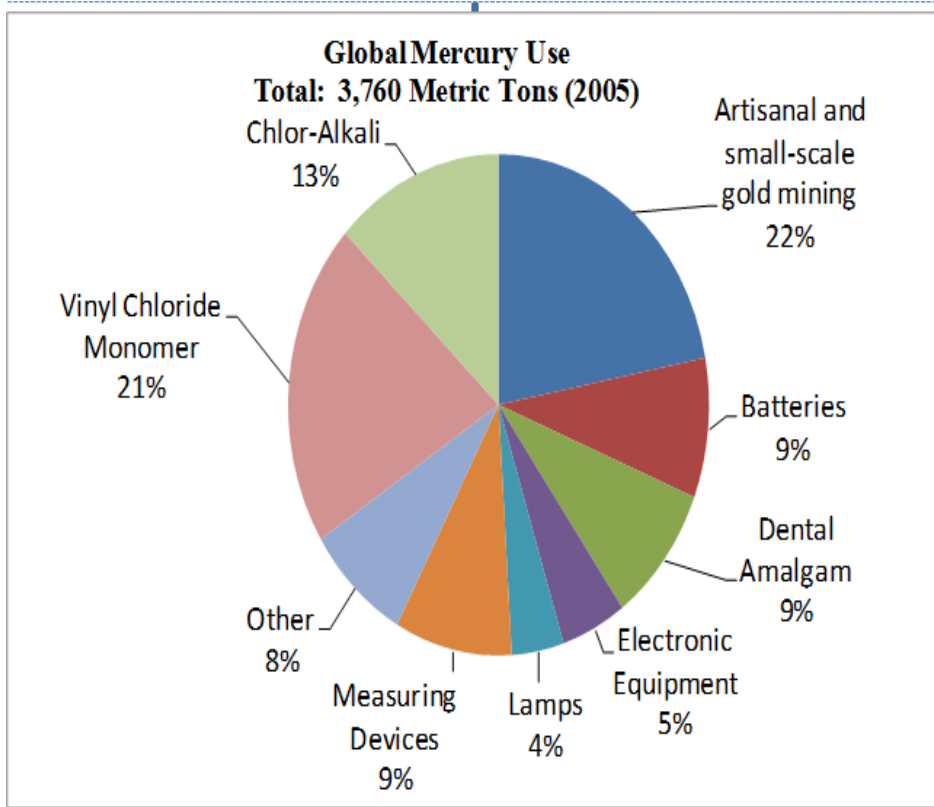


Figure 1: Global mercury use

Figure 1: “Report on current supply and demand for mercury, including projections considering the phase out of primary mercury mining”. (UNEP, 2008)

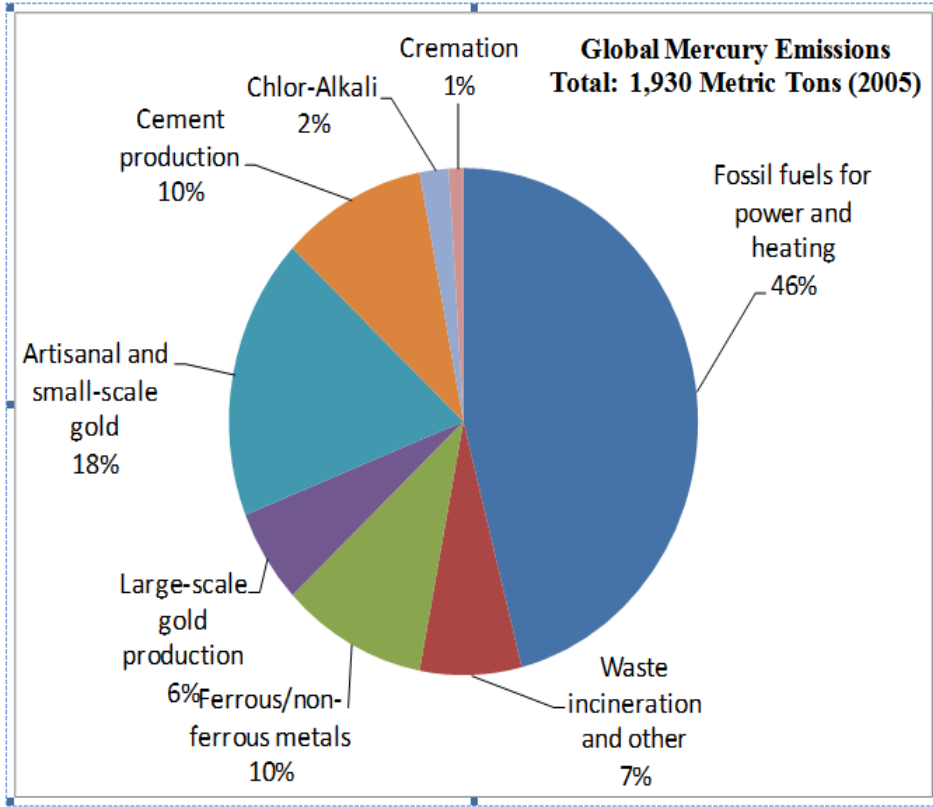


Figure 2: Global mercury emissions

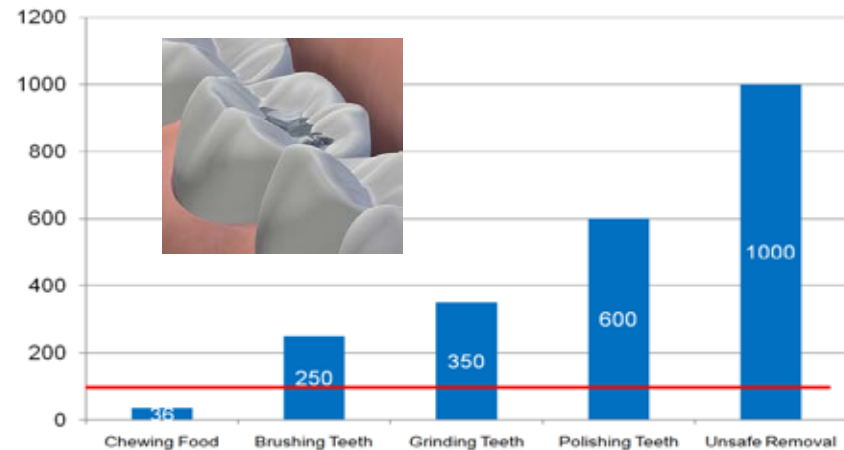
Figure 2: “Global Atmospheric Mercury Assessment: Sources, Emissions and Transport”. (UNEP, 2008)



# Examples of Mercury Use and Emission



Mercury Vapor Release (mcg/m<sup>3</sup>)



## Part II: Roadmap to a “Mercury Convention”

The 2002 global mercury assessment published by UNEP and the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), increased government recognition that mercury is a chemical of global concern.

UNEP Governing Council at its 24th session (decision GC 24/3) established an Ad Hoc Open ended Working group (OEWG) on mercury with a view to either developing a legally binding instrument or adopting voluntary measures for mercury.

OEWG agreed to support a legally binding instrument and proposed the establishment of an Intergovernmental Negotiation Committee (INC) to develop a comprehensive and suitable approach to mercury. This proposal was adopted by the UNEP Governing Council at its 25th Session in 2009.

INC has met five times to discuss the provisions of the legally binding instrument. The last meeting was in Geneva Jan 13-18 2013 where a decision was made on the terms of the convention. This process is expected to lead to the adoption of “Minamata Convention” in October 2013.



## Financial Mechanism: Guiding Principles and Modalities

- Discussion over financial mechanism started during INC2 and the guiding principle of this discussion are two-fold:
  - 1) “Strong linkages exist between the provision of financial and technical assistance and achieving compliance with a mercury instrument” and;
  - 2) “The ability of developing countries and countries with economies in transition to implement some legal obligations effectively under this Convention will depend on the availability of capacity-building and technical and adequate financial assistance”.
- At INC5 GEF was chosen as a Financial Mechanism:
  - 1) Financial Mechanism is a GEF "plus" model.
  - 2) The GEF trust fund will provide resources for Convention implementation.
  - 3) The "plus" part is a yet to be designated special program (outside of the GEF) for funding specific capacity building and technical assistance (eg, National Mercury Units). The "plus" portion will be financed through voluntary contributions, possibly through the UNEP Mercury Partnership.





## Part III: GEF Intervention on Mercury-related Activities



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# GEF<sub>5</sub> Mercury Strategy

“GEF 5 mercury resources are intended to support assessment and pilot activities that will advance the development of the global mercury instrument and improve countries’ abilities to implement the its provisions when the (mercury) instrument enters into force. ”

*- GEF Strategy for Mercury Programming*

## Priority issue areas are :

- Reducing Mercury Use in Products
- Reducing Mercury Use in Industrial Processes
- Reducing Mercury Use and Exposures in Artisanal and Small-Scale Gold Mining
- Enhancing Capacity for Mercury Storage
- Reducing Atmospheric Emissions of Mercury
- Improved Data and Scientific Information at the National Level
- Enhancing Capacity to Address Waste and Contaminated Sites.



## Mercury Resource Allocation

- **In GEF 5 US\$ 15 Million is allocated to Mercury Projects**
- **So far US\$ 8.3 Million have been approved in 12 projects.**



# GEF Projects Approved

- Reducing Mercury Use and Exposures in Artisanal and Small-Scale Gold Mining in:
  - West Africa (Burkina Faso, Mali and Senegal)
  - Latin America (Peru and Ecuador)
  - Philipines
- Reducing Atmospheric Emissions of Mercury (POPs/ Mercury Co-reduction)
  - UPOPs/mercury release reduction from Health Sector in Africa- Ghana, Madagascar, Tanzania, Rwanda
  - Global medical waste project medical waste project to reduce dioxins/furans releases and replace the use of mercury containing devices with mercury-free ones
  - Healthcare waste management as part of an FSP on waste management in Kazakhstan
  - Hospital Waste Management in Vietnam
  - Reducing mercury releases from healthcare waste in Kyrgyz Republic



# GEF Projects Approved

- Reducing Mercury Use in Industrial Processes
  - Reduction of mercury emissions in zinc smelting sector in China
  - Reduction of mercury emissions in primary mercury mining in Kyrgyz Republic
  - Reducing mercury in mercury containing products and their waste in Uruguay
- Development of mercury inventory
  - China
  - Russian Federation



## Next Steps

- Next step will be for the GEF to incorporate mercury into GEF6 planning and fund activities during the interim period before the convention is ratified.
- Interim activities may include:
  - Development of country inventories
  - Review of available infrastructure capacity and institutions
  - Assessment of enforcement capacities to ensure compliance with regulatory controls
  - Development of an outreach/information program to educate the public and industry
  - Development of action plans for initiating future activities on Mercury
  - Development of an inclusive approach to facilitate and promote the ratification of the convention
  - Development of regulatory controls to achieve compliance with the Mercury convention
  - Assessment of the needs for the introduction of technologies, including technology transfer
  - Global monitoring and effectiveness evaluation
  - Pilot demonstrations of technology, approaches and practices for the reduction and elimination of mercury emissions and releases from ASGM, atmospheric emissions, health care, municipal and e-waste



# Thanks!



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