

# COPPER PLATES

Low-cost, efficient method for **decontaminating ASGM tailings**

B2B  
B2G



Silver-coated copper plates that extract mercury from contaminated mine tailings for proper disposal or reprocessing.

Copper Plates represent a viable, efficient, and low-cost means of recovering mercury from tailings for proper disposal or reprocessing, significantly reducing the use of cyanidation to obtain residual gold. The widespread adoption of this innovation can reduce the accumulation of mercury in the environment and the exposure of communities to dangerous mercury pollution.

## RESTORATION & REMEDIATION

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## Problem

Mercury-contaminated tailings generated by artisanal and small-scale gold mining (ASGM) have significant negative impact on the environment and human health of exposed communities. Over 192 tons of mercury are released into the environment annually in Colombia.

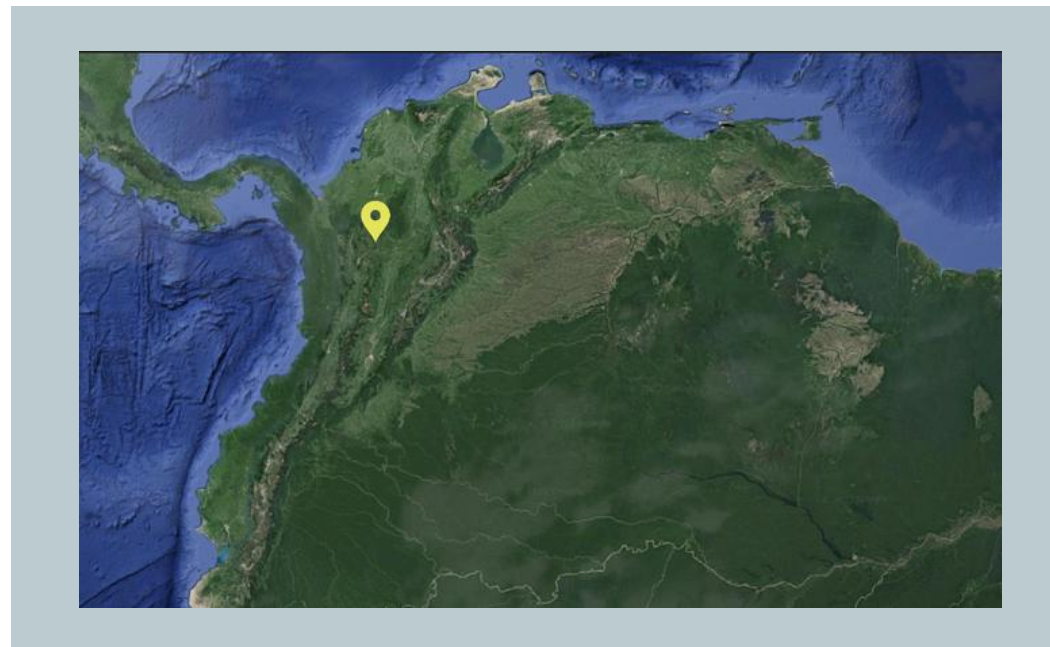
The high concentrations of residual gold in mercury contaminated tailings makes reprocessing a lucrative but potentially dangerous practice.

## Solution

A technique that uses silver-coated copper plates to decontaminate gold-bearing ASGM tailings. As tailings pass over the plates, the silver plating forms an amalgam with the elemental mercury present in the tailings, and the mercury can be captured and disposed of or reprocessed as appropriate. Additionally, miners can safely reprocess tailings for residual gold capture.

## Market

Artisanal and small-scale mining operations, government agencies and environmental authorities, and non-governmental organizations seeking to reduce and remediate mercury pollution in mine tailings and responsibly operate and close mines.



**The Copper Plates are being tested with small-scale mining operations in Antioquia, Colombia through their participation in the Amazon Colab**

## Competitive Advantage

There are a handful chemical and mechanical solutions for mercury remediation, but the low-cost and high efficiency of the Copper Plates technique provide a key advantage.

Additionally, its modular and can be operated in remote areas.

## Future Development

Continued validation and refinement of the product, development of marketing and sales channels and use agreement, publishing and disseminate results and research.

## Organization

With offices in 8 countries, Pure Earth is a leading global non-profit environmental health organization dedicated to solving pollution problems in low- and middle-income countries.

Pure Earth has received grants from the US State Department and the United Nations Development Programme



**The Artisanal Mining Grand Challenge: The Amazon** is implemented by Conservation X Labs in partnership with the United States Agency for International Development (USAID), the Gordon and Betty Moore Foundation, Microsoft, and Esri. The Challenge seeks to advance innovation solutions that make artisanal and small scale mining more environmentally responsible and socially equitable.

[www.artisanalminingchallenge.com](http://www.artisanalminingchallenge.com)

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