

Immediate Action Required: Illegal Gold Mining Destroying Communities in The Amazon

Mercury levels in some waterways are literally melting indigenous children. There is an environmentally safe alternative-that is far more profitable-and no one's talking about it.



ILLUMIGNOSIS

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Illegal mining in the Amazon rain forest. Literally everyone that lives in the Amazon has mercury poisoning, from infants to the elderly.

A little less than ten years ago, I was studying ayahuasca as the apprentice of a Shuar uwishin. One day my maestro told me that a river near Cuyabeno, Ecuador had become so contaminated with mercury from illegal gold mining that, after bathing in the river, the skin of half a dozen of the tribe's children sloughed off within minutes of getting out of the water.

Recent research found mercury poisoning in 80% of villages in the Amazon rain-forest.



In artisanal gold mining, mercury is traditionally used to form an amalgam with gold and then burned off, releasing toxic mercury vapor. Residual mercury from this process ends up in waterways and bioaccumulates in fish and people.

As an environmentally conscious semi-pro prospector myself, I recently learned that borax is an environmentally safer substitute for mercury. Borax is a common mineral salt (sodium borate) that acts as a *flux*: when you mix it with concentrated black sand and gold and then heat it, the borax melts into a glassy slag, lowering the melting point of the mix and allowing the gold to separate and collect as clean metal at the bottom of the crucible. In other words, borax lets miners smelt their concentrates directly, with simple charcoal stoves and basic tools, instead of adding mercury and then burning it off.

What I didn't know until today is that borax can recover up to 2.6 times as much gold as mercury in some small-scale operations. It hit me immediately that this is one of those rare instances where profit motive is aligned with ethics.

My first thought was, "How can this be? If borax is relatively harmless, cheaper, readily available, and more profitable, why are they still using mercury?" The answer is partly tradition and partly the isolation that is characteristic of outlaw economies. In addition, although borax has long been used as an *additive* in gold recovery, research establishing it as superior to mercury *on its own* is relatively recent. Education programs are underway in several countries, but here in Peru the situation is more complicated.

The Peruvian government legally owns all mineral resources within its borders. Small-scale prospecting is technically legal, but definitions are vague and permits are expensive. Many Indigenous groups rely on small mining operations for income, often using low-impact methods such as panning and sluicing. The larger, destructive operations have provoked government crackdowns, which in practice have criminalized low-impact, subsistence-level Indigenous miners. Here in the Sacred Valley, a taxi driver told me that local Quechua people run sluices in the middle of the night to avoid detection. Using no chemicals or fuel, they're lucky to pull thirty dollars in tiny gold flakes per night.

Perhaps the biggest obstacle to spreading awareness is the simple fact that approaching active illegal mines is dangerous business. Some are connected to cartels, and even double as coca-paste processing labs. Another factor is that Indigenous peoples—in my experience, at least—generally do not appreciate foreigners telling them what to do, regardless of the outsider’s intentions.

I am not an activist; I have no experience and have never organized any kind of campaign. However, I will be in the Amazon this August–November, and I’m willing to expose myself to some degree of risk. If by some miracle I can find funding, I have a few ideas:

- On-site demos, not lectures: Short field sessions where we process a real local concentrate twice—once with mercury (their way) and once with borax—then weigh the gold side by side.
- Local champions: Train a couple of respected miners or cooperative leaders who can keep teaching the method after I leave.
- Simple visuals: Laminated one-page diagrams in Spanish (and local languages where needed) showing a simple sequence: concentrate → borax → heat → gold, with minimal text.
- Harm-reduction framing: Emphasize “less risk, more gold, more family health” instead of moralizing about mercury use.
- Low-risk outreach: “Dusting” mining camps with pamphlets dropped by drone—or ideally from a small plane—could help reduce personal risk. Communicating with local Indigenous groups could also help gauge the risks associated with specific camps and may open pathways to safe interactions. Community outreach could include spending time in local watering holes to network, and hosting free educational seminars in gold-bearing communities.

Environmental destruction, human suffering, and even loss of life on this scale is intolerable—especially when a solution exists that benefits everyone. This is an easy sell; there is no need for ideological alignment,

nor are we asking for any sacrifice. We are simply offering free training that will increase profits for the miners.

✓ **Subscribed**

If you would like to contribute funding, ideas, networking assistance, or even your physical presence this fall, send me a message. Sharing this article or otherwise helping spread awareness is also deeply appreciated.

Message IllumiGnosis