

Costa Rica's gold mining dilemma

The following four short items are all related and relevant to the problems caused by gold mining in Costa Rica – briefly introduced in ENCA Newsletters 92 and 94. Most of the material that follows has been translated and summarised by ENCA member **Rita Drobner**, with some assistance – others might call it interference – from ENCA editor Martin Mowforth, and we are grateful to Rita for this work. Numerous sources have been used and these are acknowledged.

Open cast mining has been illegal for many decades in Costa Rica. The mining ban was reversed under President Oscar Arias' second presidency (2006 – 2010) and the Canadian mining company Infinito Gold was granted a license. When Costa Rican courts voided the license in 2010 amidst environmental concerns, Infinito Gold filed a lawsuit before the World Bank, claiming \$400 million (USD) in damages and lost profits.

In 2021 the World Bank found in favour of Costa Rica with no money owed to Infinito.

Infinito Gold Corporation had estimated gold deposits in Northern Costa Rica at 1.2 million ounces of gold. The suggestion of large deposits fuelled a gold rush in illegal mining, bringing with it organised crime and pollution with cyanide and mercury. The Environment Ministry estimated in 2018 that \$200 million (USD) of gold were exported illegally in just one year. Smuggling and fatalities through killings and accidents necessitated a permanent post and patrols by the Civil Guard in the Crucitas area.

Independent deputy Luis Diego Vargas likened Crucitas to “an area where an atomic bomb fell that destroyed the environment and every day it is affected more. There are security issues where Costa Ricans live in fear.”

Leslye Ruben Bojorges, deputy of the Christian centre right PUSC party aired his frustration on social media: “we have been in this story for decades and twenty years of pollution. They steal the gold and there is prostitution.”

Parts of the Costa Rican government favour regulated and legal mining and the Executive Branch of the Assembly proposed legislation 24.717, which was passed by the Alajuela Commission on 11 September 2025. The draft outlines that the Ministry of Environment and Energy (MINAE) would be responsible for granting exploration permits exclusively to companies “demonstrating robust technical, environmental and financial capabilities.”

Concessions would be available only to closed-cycle gold mining, thus avoiding the discharge of cyanide and mercury used in open-pit mining. Additionally, the concession for mining would require a percentage of the gross gold sales to be paid to local and national government.

The Tico Times (an English language weekly online newspaper) reported that the supporters in the Alajuela Commission hope that regulated mining would bring order, generate jobs, and fund some of the clean-up. Critics state that legal mining will not stop the illegal mining, and question whether any clean-up would compensate against the renewed environmental risks through regulated closed-cycle mining.

Opponents propose a sustainable regeneration programme without mining instead.

Costa Rica's Crucitas Faces Environmental Disaster from Illegal Gold Mining

Abridged from the [Tico Times](#), August 27, 2025

Environmental crime in Costa Rica has escalated dramatically, with the illegal gold mining crisis in the Crucitas region now bearing all the hallmarks of organised crime, according to Environmental Prosecutor Luis Diego Hernández.



Speaking on the growing threat, Hernández warned that criminal networks have seized control of gold mining operations not just in Crucitas, but also in other critical ecosystems like [Corcovado National Park](#) in the South Pacific.

“The Public Prosecutor’s Office has identified figures like sponsors, resource providers, infrastructure coordinators – this mirrors the structure of drug trafficking organisations,” Hernández explained. “These are not isolated miners. These are tightly controlled operations run by specific individuals or groups.”

The operations, according to Hernández, involve the systematic provision of industrial-grade tools, makeshift infrastructure, and hazardous substances like mercury and cyanide – chemicals used to extract gold from rock, but which pose grave environmental and health threats. “We are dealing with trafficking in dangerous substances. The phenomenon has reached a point where we can confidently say this is organised crime,” he added.

Hernández also confirmed that [illegal gold mining](#) operations are directly linked to money laundering schemes, further embedding environmental exploitation into Costa Rica’s broader criminal underworld.

A cross-border investigation titled *Mined Countries* – conducted by *La Voz de Guanacaste*, *Interferencia de Radios UCR* (Costa Rica), *Revista Concolón* (Panama), and the Latin American Centre for Investigative Journalism ([CLIP](#)) – exposed a staggering

623 per cent rise in cyanide imports over the past decade. The chemicals are often transported without oversight and used indiscriminately, contributing to toxic pollution in mining zones such as Crucitas and Abangares.

Local ecosystems and nearby communities pay the price. Runoff from illegal mining has contaminated rivers, degraded biodiversity, and exposed residents to toxic substances.

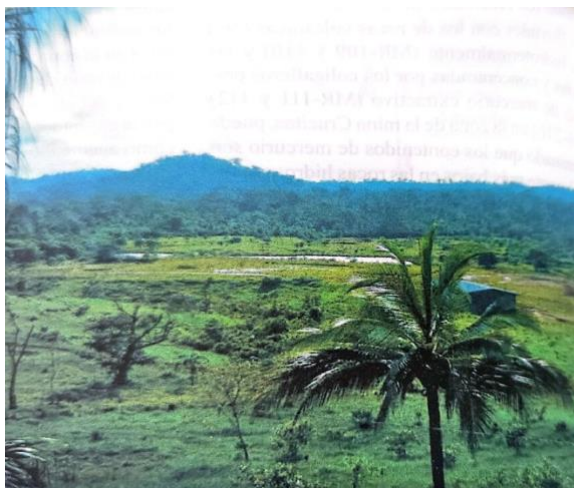
“No one is offering a real solution,” Hernández lamented. “And the problem keeps growing.” Environmental advocates warn that if the current trajectory continues, not only will Costa Rica’s rich biodiversity face irreversible damage, but communities in the path of illegal mining operations will also remain vulnerable to violence, economic exploitation, and severe health consequences.

Highest levels of mercury found in the El Pantano wetland and in streams running from Crucitas into the Río San Juan.

Information from “Geochemical Atlas of Costa Rica. Volume 2 - River sediments, waters and rocks: Environment and Mineralisation”, *EdiNexo, San José, 2024.*

The extreme mercury pollution in freshwater sediments of the streams Descubrimiento and Crucitas and their flood plains reflect the illegal gold mining in this area.

Values of mercury above 0.08 mg/kg were obtained in three samples of freshwater



View of El Pantano from a civil guard post in Crucitas (Source: *Atlas Geoquímico de Costa Rica, volumen 2*)

sediment in El Pantano. According to the Atlas this is the wetland where the overall highest mercury concentration of 0.25 mg/kg was found.

Other elevated mercury concentrations were found in the channel of the Río Infiernito or Infiernillo that flows 4 km to the Northwest of El Pantano, in the mining area of Crucitas, with concentrations measuring 0.11, 0.17 and 0.13 mg/kg. The samples were collected on 2nd September 2021.

Other contaminants such as cadmium, were found within legal limits set by the Health Ministry.

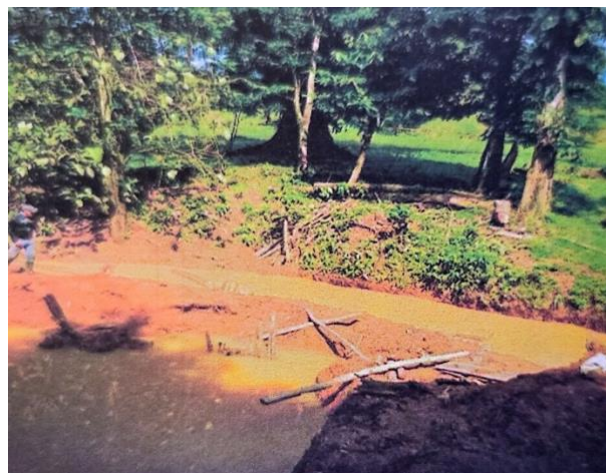
Fabiola Pomareda Garcia (of the Costa Rican weekly online newspaper *Semanario Universidad*) highlighted the mercury pollution at Crucitas amidst the renewed debate on licensing gold mining.

A Geochemical Atlas of Costa Rica

On 1st August 2025, Fabiola Pomareda Garcia introduced readers to a sample of data provided by the ‘Geochemical Atlas of Costa Rica. Volume 2 - River sediments, waters and rocks: Environment and Mineralisation’, (2024), *EdiNexo, San José.* A tiny example of this data is given in the piece above.

The project of the geochemical atlas in Costa Rica was initiated in 2012 by Rolando Castillo Muñoz, who carried out and financed the undertaking. According to Castillo, this work is unique in Central America and can help inform research and decisions on agricultural production, industry, public health and environment.

Castillo Muñoz thanks the state of Costa Rica which supported the academic development through the University of Costa Rica (UCR) and the Imperial College of London (United Kingdom) where he came across the first geochemical atlas of England and Wales in 1973 during his undergraduate studies. On return to Costa Rica, he



Channel of the Crucitas stream, located on a private estate (Source: *Atlas Geoquímico de Costa Rica, volumen 2*)

realised the potential of such an atlas for his country.

The first volume of the Atlas was published in 2019 under the title ‘Geochemical Atlas of Costa Rica. Soils: Fertility and Environment’.

Volume 2 of ‘Geochemical Atlas of Costa Rica. River sediments, waters and rocks: Environment and Mineralisation’ was published in October 2024 and informs Garcia’s article on mercury pollution in the areas of gold mining in northern Costa Rica.

In addition to physio-geographical information and geological and mineral characteristics of Costa Rica, this volume includes the mapping of chemical flows in sediments (solid materials transported and deposited by river water). The maps are based on 419 samples taken from all major river basins of the country and each site was analysed for 34 chemical elements.

Volume 3 of the Geochemical Atlas is in draft and will deal with the freshwater bodies and rivers on the Costa Rican mainland.

The Atlas is published by *EdiNexo* and can be found in the university library of the *University of Costa Rica (Librería UCR)*.

By Rita Drobner

Sources: *Ticosland* (<https://ticosland.com/>), corporate news outlet, 12 September 2025, and *Tico Times* 29 September 2025.