

STOLEN AMAZON: THE ROOTS OF ENVIRONMENTAL CRIME IN BOLIVIA



“Mapping Environmental Crime in the Amazon Basin”: Introduction to the Series

The “Mapping Environmental Crime in the Amazon Basin” Case Study Series seeks to understand the contemporary dynamics of environmental crime in the Amazon Basin and generate policy recommendations for key stakeholders involved in combating environmental crime at the regional, national, and local levels.

The Amazon Basin sprawls across eight countries (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela) and one overseas department of France (French Guiana). In recent years, research and policy communities have developed a sound understanding of deforestation and degradation dynamics in the region and the ways economic actors exploit forest resources under different state regimes. This series sheds light on a relevant dimension of the phenomenon: the role of illicit actors and economies in fueling deforestation.

This series of studies draws a complex picture of the continuous socio-environmental impact of authorized and/or licit economic activities on the Amazon forest and its people. It reveals the spatial and temporal dynamics of specific categories of environmental crime, their intersection with legalized economic activities, and their linkages with other types of crimes and social violence. It also sheds light on the political economy of criminal markets,

the organizational characteristics of crime groups, and government agencies’ collusion in environmental crimes. The reports also discuss the record of past and current governmental measures to disrupt and dismantle criminal networks that have diversified into environmental crime across the Amazon Basin.

The studies under this series illustrate how, in different countries in the Amazon Basin, both licit and illicit actors interact and fuel environmental crime and degradation in a time of climate emergency and accelerated socio-political change across the region. Meanwhile, recent actions taken by states to combat environmental crime – mainly to reduce deforestation and illegal mining – have been hindered by the weakening of environmental protections and land regulations. More often than not, political, and economic elites are either complicit in or oblivious to the destruction of the Amazon forest.

This series is led by the Igarapé Institute, an independent think and do tank headquartered in Rio de Janeiro that works on solutions in the public, climate, and digital security agendas, in partnership with InSight Crime, a non-profit organization conducting on-the-ground-reporting, research, and investigations on issues related to organized crime in Latin American and the Caribbean.

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This present study on Bolivia was led by InSight Crime. The findings and analysis are based on one year of open-source and fieldwork investigation in the cities of La Paz and Santa Cruz, and desk research, phone, and face-to-face interviews with environmental experts, government and security officials, members of local communities, academics, and others.¹

The report provides a snapshot of the complex web of actors (state and non-state) and relationships fueling environmental crime in the Bolivian Amazon. Rather than just diagnosing the issue, the study aims to raise new dialogue and intervention opportunities regarding environmental crime in the region. This study addresses long-standing issues of securing land rights to traditional communities in the Amazon, many of which currently face new forms of land grabbing and land trafficking, notably by export companies extracting natural resources.

It also includes ideas for reforming and strengthening structurally weak and corruption-prone public institutions in the Bolivian Amazon, notably those related to land, environmental, and security issues. Finally, the report also sheds light on the transnational and cross-border dynamics of environmental crime in Bolivia in activities such as wildlife trafficking and illegal mercury trafficking for river-gold mining and illegal logging exports. The complexity of increasingly globalized supply chains initiating in or cutting through the Bolivian Amazon call for more and stronger regional and international cooperation to dismantle environmental crime and protect the forest and its people.

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Executive Summary

In Bolivia, prospectors are digging craters and poisoning rivers in Madidi National Park. This natural treasure stretches from the Andes to the Amazon. Intensive farming, meanwhile, is ravaging the country's Amazon forests, including the Chiquitania, the largest dry forest in the world. Fires set, mostly to illegally clear land, often turn into runaway blazes that leave behind deserts of scorched earth.

Bolivia's 60 million hectares of Amazon – which spans part of the departments of Pando, Beni, Cochabamba, La Paz, and Santa Cruz – boasts some of the basin's most biodiverse wilderness. Bolivia's Amazon is often forgotten, with other countries receiving the bulk of international attention.² Yet the country trails only Brazil in terms of annual forest loss.

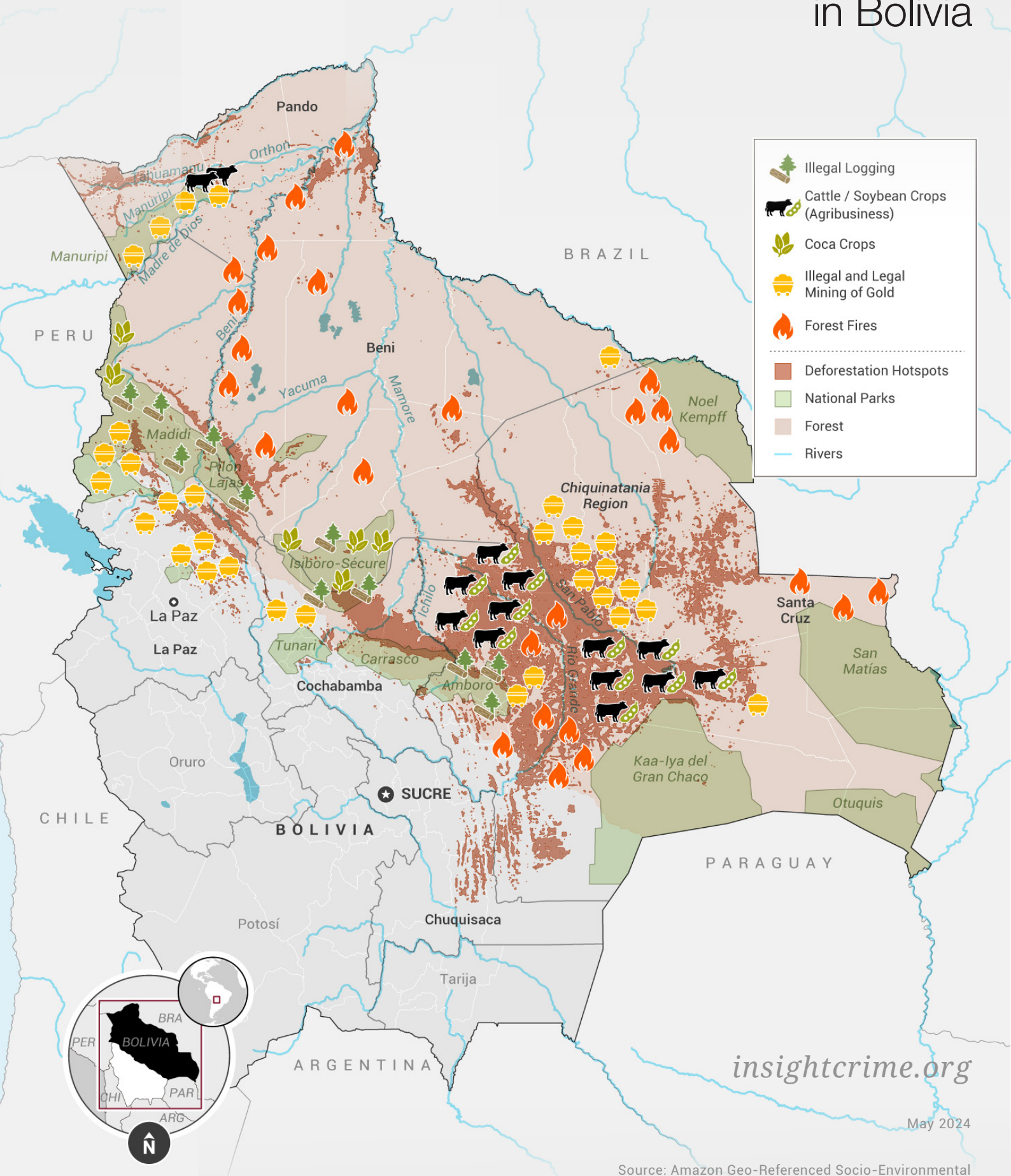
In 2022, Bolivia lost a record 245,177 hectares of primary forest – the most ecologically significant forests on Earth for carbon storage – which accounted for 12.4% of the total deforestation across the Amazon that year. To put that in perspective, Colombia's and Peru's Amazon regions, which combined form a territory of some 127 million hectares, or just over double that of Bolivia, accounted for just 12.2%, according to the Monitoring of the Andean Amazon Project (MAAP), a network dedicated to tracking deforestation in the Amazon.³

Most deforestation in Bolivia's Amazon is driven by gold mining and widespread land clearing for agribusiness.⁴ In other Amazonian countries, such activities are illegal or at least regulated.

Bolivia has only a semblance of laws designed to stop environmental destruction. The reality is that actors involved in deforestation are left unchecked by the government, thanks to their power and influence. Gold mining cooperatives, soy farmers, and cattle ranchers are all shown extraordinary lenience. They exploit power vacuums, legal loopholes, incoherent or conflicting regulations, and weak enforcement. And they use legal, semi-legal, and illegal means to lay claim to vast tracts of forest to further their business interests.

The scope of what is legal “is so broad, and the will to enforce existing laws is far less than in other Amazon countries,” said Cecilia Requena, senator for Bolivia's Citizen Community Party, and head of the Commission on Land and Territory, Natural Resources and the Environment. “At the same time, significant illegality isn't classified as organized crime,” she stated. Requena has faced physical attacks and threats during her investigative trips to the region.⁵

Main Drivers of Deforestation in Bolivia



insightcrime.org

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Source: Amazon Geo-Referenced Socio-Environmental Information Network, Mongabay, InSight Crime investigations, UNODC Monitoring of the Andean Amazon Project

Much of Bolivia's massive Santa Cruz department, which encompasses one-third of the country, is set aflame every year.⁶ Speculators slash and burn forests, knowing the government's land titling agency will later provide them concessions. Farmers produce soy and beef on the deforested lands.⁷ They sell to commodity traders whose due diligence of their suppliers is limited at best.⁸ Always hungry for new tracts of land, farmers head deeper into Bolivia's Amazon, encircling Indigenous territories and encroaching on reserves.⁹

At the same time, Bolivia's mining cooperatives employ heavy machinery and massive barges to dig up Amazon waterways in search of gold.¹⁰ In some cases, the cooperatives – which began as simple unions but have evolved into more powerful entities – serve as fronts for Chinese, Colombians, and other foreigners who illegally subsidize mining efforts.¹¹ Exporters are known to whisk gold of unknown providence out of the country, thereby laundering it.¹²

As gold mining has boomed in Bolivia, so have mercury imports, which are used to separate gold dust from sediment.¹³ Bolivia signed the Minamata Convention on Mercury about a decade ago, a United Nations treaty through which more than 100 countries promised to cut their mercury pollution. But Bolivia's government continues to allow an uninhibited influx of the toxic metal, eschewing even basic regulations, such as requiring importers to be certified.¹⁴

The country is by far the biggest importer of mercury in the Americas.¹⁵ Until recently, Bolivia's number-one supplier had been Mexico, but now is Russia, which has not ratified the Minamata treaty.

The surge in imports have fueled a brisk trade in smuggled mercury. Bottles of mercury are transported across land and river borders into Peru and Brazil, whose Amazon regions are currently experiencing a catastrophic illegal gold rush.¹⁶ The widespread use of mercury by prospectors is contaminating rivers and forests, and poses a significant threat to the lives of Indigenous people.¹⁷

Although not as widespread as the industrial scale activities of mining and agriculture, illegal logging has also resulted in significant losses of Bolivia's Amazon forest. National parks and reserves, which are lightly monitored, are especially susceptible.¹⁸ Trafficking networks steal mara wood, a vulnerable and valuable mahogany species, which is then smuggled to Peru and Brazil for export. In addition, Bolivia has a domestic market for illegally sourced wood.¹⁹

Bolivia's wildlife is also being plundered. Jaguars, in particular, are killed for their parts, which are prized in Asia.²⁰ Road construction by Chinese companies through Bolivia's Amazon has opened the way to further incursions by the jaguar traders. Environmental groups have documented seizures of hundreds of the felines' fangs and claws in shipments headed to China, via networks run out of Chinese-owned restaurants and shops.²¹

Canaries, cockatoos, parrots, and other birds are peddled in local markets and smuggled to neighboring countries for the pet trade.²² River turtles are threatened by rampant poaching for their eggs and meat.²³

Furthermore, Bolivia's Amazon hinterlands have become a drug trafficking corridor to Brazil. In the departments of Pando, Beni, and Santa Cruz, primitive camps for cocaine production have sprung up in the middle of forest reserves.²⁴ Waste from the refinement process, which includes gasoline and chemical pollutants, is dumped into rivers. Airstrips carved into forests serve small planes that take off from Peru.²⁵

Though growing coca for consumption is legal in Bolivia, the government allows only 22,000 hectares for official cultivation. The actual amount of land used for cultivating coca has outstripped that limit, reaching some 29,900 hectares in 2022.²⁶ Nearly 500 hectares of coca are being grown in protected areas and natural parks. Estimates have put the illegal drug trade in Bolivia to be worth as much as US\$ 2 billion annually.²⁷

The intersection between environmental crime and other criminal structures in Bolivia is less firmly established than in places like Colombia, where armed groups are piggybacking environmental crime onto a long history of drug crime.²⁸ But opportunities for such a nexus could emerge in Bolivia. For example, several experts said profits from the Colombian cocaine trade are suspected of funding Bolivian gold mining operations.

Combating environmental crime in Bolivia requires some of the same steps as those needed by other Amazon countries in the region, such as improving enforcement of protected areas and preventing the smuggling of timber, mercury, wildlife, illegal gold, and land grabbing related to the aggressive agricultural expansion on both sides of the Bolivia-Brazil border. Corruption that facilitates environmental crime must also be tackled.

But Bolivia presents a unique challenge. By design, institutions meant to control mining and agricultural activities are weak and ineffective, and penalties for environmental crimes are mostly theoretical. The country must address this situation soon if the intention is to halt the imminent destruction of its Amazon.

VANISHING TREES AND LAKES: DEFORESTATION IN BOLIVIA'S AMAZON

Deforestation has reached alarming levels in Bolivia. The main driver of tree cover loss – loss of the canopy – is the rise in slash-and-burn land clearance practices. Settlers often start the human-caused fires to clear space to grow soy and raise livestock. These fires often get out of control.

The battle against deforestation is complex. Producing soy and beef for export benefits the agribusiness industry and powerful economic elites with ties to the government. Now, with the agriculture and cattle ranching industries hungry for new tracts of land, farmers and ranchers are pushing deeper into the Santa Cruz department and Bolivia's Amazon.

Trees suddenly turn gray in a forest reached by an all-terrain vehicle. Julio Zebers, a volunteer firefighter in his forties, points to the devastation caused by Bolivia's latest rash of wildfires. Walking past charred tree stumps, he smokes a cigarette to keep the mosquitos at bay.²⁹

Fighting a raging wildfire, he described, is akin to standing on the brink of a thunderstorm: the "sound resembles an electric shock." The smoke is dense and suffocating. However, the most harrowing aspect is witnessing animals perish in the flames. "I see the species that die: snakes, monkeys, lizards. No matter how insignificant it may seem, it pains me," Julio said.

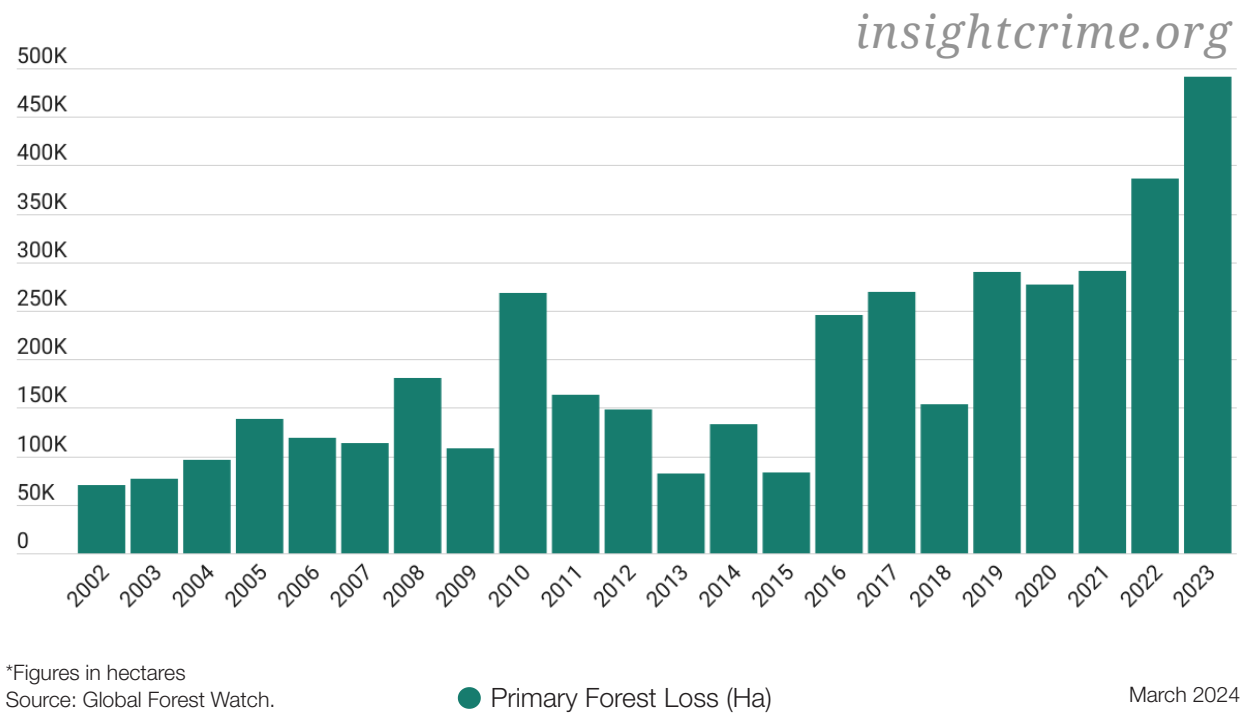
Bolivia's 60 million hectares of forest boast some of the Amazon basin's most biodiverse and unique wilderness.³⁰ This includes the rainforest and Chiquitania, the largest tropical dry forest in the world, home to species found nowhere else.³¹

Yet Bolivia is often forgotten amid the international attention given to destruction in the Amazon, despite trailing only Brazil in annual forest loss. Bolivia's record **245,420** hectares of primary forest lost in 2022 accounted for 12.4% of total deforestation in the Amazon that year.³² Colombia's and Peru's Amazon – a combined territory of some 127 million hectares – accounted for just 12.2%, according to the Monitoring of the Andean Amazon Project (MAAP), a network dedicated to tracking deforestation in the Amazon.³³

More than half of Bolivia is made up of Amazon wilderness. The region extends southward across Pando, Beni, and Santa Cruz departments, covering much of the country's northeastern part.³⁴ It touches the northern part of La Paz and the eastern edge of Cochabamba.³⁵

Destruction of this vital and often neglected corner of Amazon has accelerated at an alarming rate. Between 2002 and 2023, more than 4 million hectares of primary forest, an area the size of Switzerland, were lost, according to data from Global Forest Watch, an online platform that monitors deforestation worldwide.³⁶ This represents a 10% decrease in primary forest cover since the beginning of 2000.³⁷

Primary Forest Loss in Bolivia, 2002-2023*

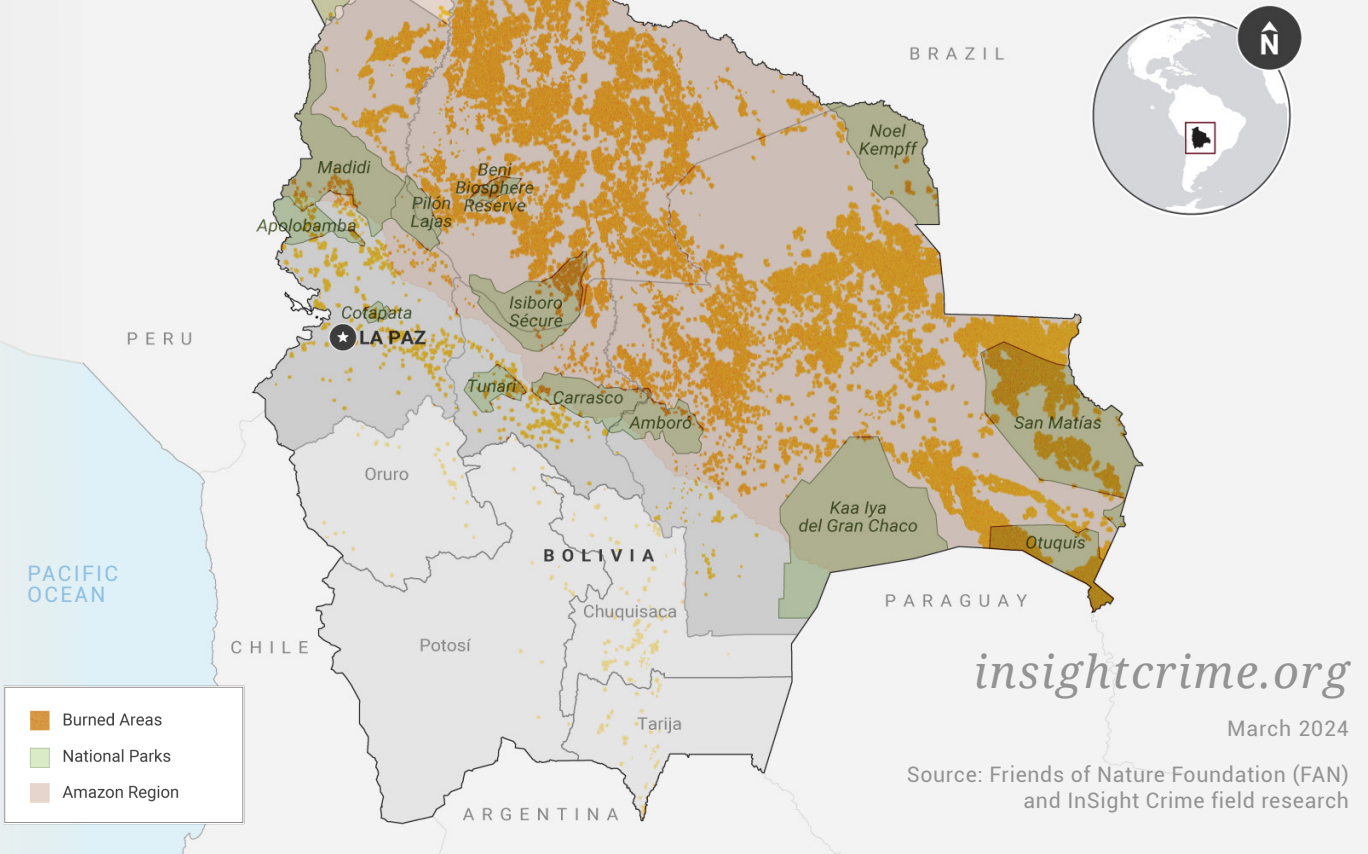


Much of the recent deforestation stems from unchecked fires. The human-caused infernos are set to clear land for agriculture in a “slash and burn” practice known as “chaqueo.”³⁸ Thousands of fires, many set illegally, balloon into runaway blazes that consume vast tracts of forest.

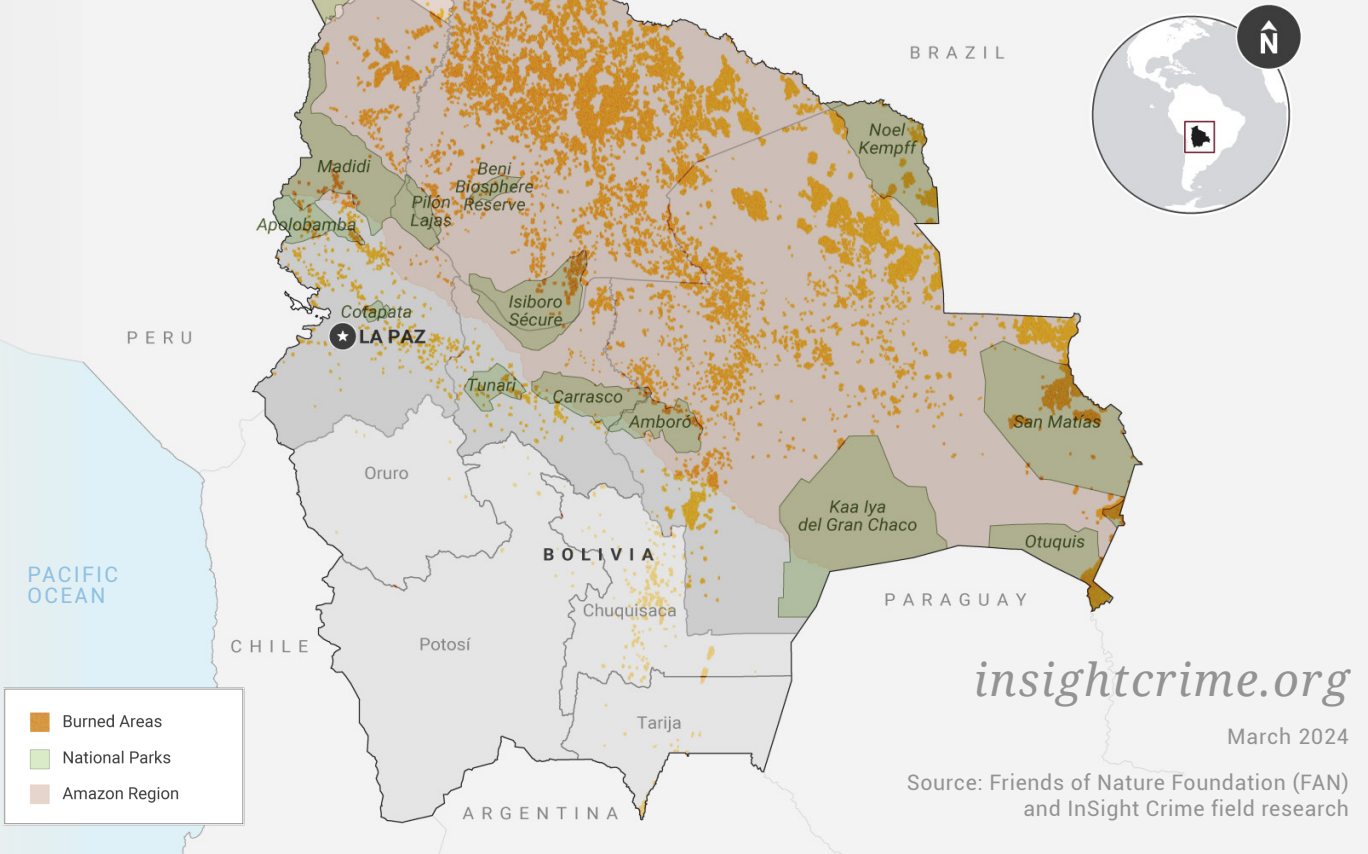
Though fires are nothing new in Bolivia’s Chiquitania, and some degree of natural fire is even necessary for the ecosystem, they have become much more frequent and intense, according to biologist Steffen Reichle.³⁹ During drought periods, which have grown longer in recent years, the Chiquitania is a tinderbox. “When you have a forest like this on fire, it is impossible to stop it,” Reichle said.

The blazes also emit massive amounts of carbon dioxide into the atmosphere. According to Bolivian researcher Pablo Villegas, when fire season peaks, a map of carbon emissions shows levels soaring over the country.⁴⁰ At certain times, Villegas said, Bolivia becomes “the zone with the highest concentration of carbon emissions in the world.”⁴¹

Forest Fires Across Bolivia in 2019



Forest Fires Across Bolivia in 2020



Cattle and Agriculture in the Bolivian Amazon

Along the roadway from Santa Cruz to Santiago de Chiquitos, signs offer plots of land for sale. Small, white placards with black letters mark the names of farming communities. Larger signs indicate cattle ranches or soy plantations.

This flat, burned yellow landscape was once made of Chiquitania dry forest.

According to Alcides Vadillo, regional director of Bolivia's Earth Foundation, land in Bolivia's Amazon is much more valuable after being cleared. This results in various actors using legal, semi-legal, and illegal means to transform forests into land for farming or cattle-rearing. Bolivia's government, meanwhile, fuels the destruction by weakening land-use laws, encouraging settlers, and promoting agribusiness in the Amazon.⁴²

In 2012, President Evo Morales (2006 – 2019) promoted his Framework of Mother Earth (Marco de la Madre Tierra y Desarrollo Integral para Vivir Bien), a law that ostensibly prohibited the forest conversion to other uses.⁴³ One year later, Morales' Patriotic Agenda 2025, a rampant development plan.⁴⁴ The plan called for the aggressive expansion of agribusiness, particularly soy and beef for export.⁴⁵ To accomplish this, some six million hectares of forest were to be converted into new farmland by 2025.⁴⁶

Bolivia's current President Luis Arce, a former finance minister under Morales, has followed the same script. Land ownership in Bolivia falls into five broad categories: private property,⁴⁷ community property, Indigenous territory, state-controlled (referred to in Spanish as *tierra fiscal*), and protected.⁴⁸ At the national level, two government agencies administer all these lands.

The National Institute of Agrarian Reform (INRA) is responsible for titling and distributing territory.⁴⁹ The Authority for the Social Audit and Control of Forests and Lands (ABT) reviews and approves environmental plans, and grants authorization for clearing forests.⁵⁰

ABT approvals for forest clearing have soared in recent years. Between 2016 and 2021, the agency authorized the deforestation of 212,000 hectares annually.⁵¹ During this period, Bolivia lost an average of 255,000 hectares of forest per year, meaning authorized clearing accounted for 83% of total deforestation.⁵² But in the past six years, from 2010 to 2015, ABT permitted clearing only 70,000 hectares annually, according to a 2022 investigation by the Earth Foundation.⁵³ According to the Earth Foundation, the extraordinary increase in deforestation authorized by the ABT is one of the biggest consequences of the Patriotic Agenda 2025.⁵⁴

Between 2016 and 2021, about 70% of deforestation in Bolivia occurred on lands that were once public but were retitled as private property for agricultural use.⁵⁵ Nearly a quarter occurred on agricultural community lands, and just 5% on Indigenous territory.⁵⁶

Legal changes and deregulation over the last several years have also allowed more land to be deforested. Bolivia's 2013 Forest Restitution Law, known as the *perdonazo*, or grand amnesty, allowed farmers to legalize land illegally cleared.⁵⁷ Speculators, who invade forests, and landowners, have continued to claim and illegally cut down chunks of forests under the assumption that they will be granted amnesty.⁵⁸

Up to 20 hectares of forest can now be cleared without a government permit or fee.⁵⁹ Fines for illegal deforestation have been slashed from up to US\$ 300 per hectare to as little as a US\$ 10.⁶⁰ "What has been the government's response? To forgive and forgive," Vadillo said.

Land titling laws actively promote deforestation. After being awarded a parcel of land, the owner has two years to show that it is not lying fallow, or risk having it confiscated by the state.⁶¹ Landowners must declare to the titling agency their land's economic and social function, with the easiest-use cases being agriculture or cattle-rearing.⁶² This has stimulated people to cut down forests and commit their lands to such activities.⁶³ Land is often deforested before official government demarcation, to pressure the titling agency and keep out would-be invaders.⁶⁴

Owners “have to clear because [the land] is taken away from them if they are not putting it into production,” said Marlene Quintanilla, director of research and knowledge management at the Bolivian environmental advocacy group Fundación Amigos de la Naturaleza (FAN).⁶⁵ “It distorts the law, because the standing forest fulfills an economic and social function, but this is not understood technically.”⁶⁶

Santa Cruz: The Heart of Amazon Deforestation in Bolivia

Most recent deforestation in Bolivia has occurred in the department of Santa Cruz, the country's agricultural hotspot. Santa Cruz is home to half of the country's forested land, including biodiverse tropical and critically endangered dry forests.

Beginning in the 1950s, successive Bolivian governments opened Santa Cruz to agriculture. Roads were built to connect the region to the main cities of Cochabamba and La Paz, in the western part of the country.⁶⁷ Subsidies were offered to grow specific crops, including rice, cotton, and sugar.⁶⁸ Programs were implemented to resettle people from the highlands, to bolster farming.⁶⁹

Over the last three decades, agriculture in Santa Cruz has expanded exponentially. The growth has been driven by mechanized agricultural production of export commodities, particularly soy.⁷⁰ Cattle farming has also increased, producing beef for export, and feeding a growing local demand.⁷¹

During this time, deforestation accelerated in a 2.7-million-hectare triangle known as the agro-industrial zone.⁷² From 1990 to 2015, some 2.2 million hectares of forest were cut down there. Agribusiness accounted for 57% of deforestation, or some 1.3 million hectares.⁷³

Small-scale farming – cultivations on less than 50 hectares, or cattle ranches up to 500 hectares – accounted for 30%, though many plots were only titled small farms, when they were part of larger entities.⁷⁴

According to the Earth Foundation, at least 700,000 hectares of forest were cut down illegally in Santa Cruz and then regularized through amnesty laws or after minimal fines.⁷⁵

With nearly the entirety of the agro-industrial zone in Santa Cruz titled and deforested, agribusiness began to spread outside of it.⁷⁶ During the 2000s, deforested lands grew along the southeastern edge of the zone, spreading to the border of the Gran Chaco Kaa-lyá National Park.⁷⁷ Much of the forest there was originally under state control, but later got titled to agribusinesses.

Between 2016 and 2021, nearly 1.5 million hectares of forest were razed in Santa Cruz, according to figures compiled by the Earth Foundation.⁷⁸ About 90% of the deforestation occurred outside of the agro-industrial zone.⁷⁹ Deforestation ballooned in a northeastern corner of Santa Cruz, near its border with Brazil. Similarly, new land clearings cut across the southeastern edge of the department.⁸⁰

This agricultural expansion benefits from the proximity to Mato Grosso, the Brazilian state that shares most of the border with Santa Cruz. This state has dedicated nearly 18 million hectares to agribusiness, bringing together the two agricultural industries in both countries.⁸¹

According to research conducted by the Amazonian Network of Georeferenced Socio-Environmental Information, encroachment, and deforestation in these two states are intimately related. The convergence of these economies has meant that businesspeople and companies do not discriminate between national borders and promote land clearing in both countries to expand their business and maximize profits.⁸²

A mix of illegal deforestation and land retitling schemes enables environmental offenders to successfully “launder” Bolivia’s protected lands. This pattern is at the heart of a surge in deforestation activities near Laguna Concepción, a lake protected under the Ramsar Convention. Established by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1971, this treaty seeks to create a global network of wetlands designated for protection and conservation.⁸³

In 2009, the municipal government of the nearby town of San José de Chiquitos took the first step to protect the lake by creating a 120,000-hectare reserve around it.⁸⁴ Two years later, the department of Santa Cruz conducted a geographical study that reported that private property comprised about 40,000 hectares of the reserve.⁸⁵ By 2021, private land titles had increased to 74,000 hectares, nearly two-fold from the amount tallied in the 2010 study.⁸⁶

As of 2021, forest cleared for agribusiness had reached 33,500 hectares, more than double the 16,000 hectares.⁸⁷

Deforestation, water diversion to agribusinesses, and frequent droughts have taken a shocking toll on the lake, which at times has vanished entirely. In 2020, dead fish – including sábalo, catfish, and piranhas – littered its depleted shoreline for miles.⁸⁸

“Why does INRA and ABT permit lands to be given in protected areas, in forest reserves?” asked an agri-environmental expert, who prefers to remain anonymous for security reasons.⁸⁹

Actors Stoking Deforestation in Bolivia’s Amazon

Settlers, Mennonite communities, and agribusiness have spearheaded recent deforestation in Bolivia’s Amazon. They at times work in concert, obtaining land by way of invasions, legal loopholes, amnesty for illegal deforestation, shady business deals, and other means.

Groups known as *interculturales*, or intercultural communities, are also claiming land and settling in the region. Intercultural communities are agricultural workers that, during the 60s and 70s, were involved in colonization programs that aimed to populate the Bolivian Amazon and other remote regions. Today, they continue to expand into Santa Cruz and the rest of the Amazon.⁹⁰

Organized in 24 federations nationwide and at more than 2.5 million people strong, the *interculturales* claim to represent the country’s underprivileged agricultural class and carry enormous power due to their strong ties to Bolivia’s ruling party, the Movimiento Al Socialismo (MAS).⁹¹

Over the years, the *interculturales* have opposed elites who populated departments including Santa Cruz, took over the agro-industrial businesses there, and caused displacement of local communities.⁹²

The struggle between the two groups has been balanced in the favor of the *interculturales* since Evo Morales took office in 2006. The former president, who considered himself an intercultural migrant from Oruro, implemented an economic development model that favors these intercultural groups, but which contributes to deforestation.⁹³

Understanding the accountability of intercultural groups requires acknowledging the significant role played by the Santa Cruz elites, who are proprietors of large agricultural enterprises. As highlighted here and in our regional report, the complexity of this phenomenon cannot be attributed to a single entity.⁹⁴

The intercultural communities are powerful. Indeed, its head organization, the Confederación Sindical de Comunidades Interculturales de Bolivia (SCIB), has obtained for its affiliates 25 million hectares, more than a quarter of the total land titled by the government, according to a 2021 report by Earth Foundation.⁹⁵

According to Bolivia's National Coordinating Council of Indigenous Peoples for the Defense of Territories and Protected Areas (CONTICAP), some 1,500 families belonging to intercultural communities have settled in Santa Cruz.⁹⁶

Several environmental crime experts and journalists consulted by InSight Crime, who have followed deforestation in Bolivia closely, said that the mobilization and transfer of families to Santa Cruz is a form of political territoriality, by which regions can be controlled.⁹⁷

Where settlers have occupied lands, disputes with locals and Indigenous people have erupted. "This generates a complicated situation. Those who have authorization from INRA believe that they are already owners [of the land]. There is resistance from local populations who say that they cannot enter the area," Vadillo said.⁹⁸

Settlers also fell trees in a mad rush after receiving authorization from INRA, and often encroach on protected or Indigenous lands. To cite one example, settlers recently razed forest in the Bajo Paraguá Municipal Protected Area, a reserve established in 2021 to protect nearly 100,000 hectares of tropical and dry forest that serves as a critical corridor for wildlife.⁹⁹ Indigenous people, local officials, and Amazon conservationists told the environmental news outlet *Mongabay* that settlers arriving there have connections to the MAS and have illegally provided titles to lands.¹⁰⁰

Four Indigenous communities who live within the Bajo Paragua reserve said in a joint statement last year that they were the victims of "organized land traffickers" promoting illegal settlements to expand the agricultural frontier.¹⁰¹

Vadillo said "ghost communities" of 20 to 30 people are also created to obtain land.¹⁰² From nearby cities such as Santa Cruz, Montero, Cochabamba, and Yapacaní, these people have no intention of resettling or farming. Instead, they pay for the forest razing and later sell their plots.¹⁰³

"They generate a hidden land market," Vadillo said. To own the land, settlers must be present for two years. "But before they are given the title, these people are already selling."¹⁰⁴

In some cases, land traffickers have used false documents and fake names to form intercultural communities and request land from the government, only to turn around and sell it. People in agribusiness looking for new territories have also formed intercultural communities. For example, in the eastern region around San Martín, locals told Earth Foundation investigators that soy farmers from San Julián, a town some 300 kilometers to the southwest, had formed an intercultural community to obtain farmland.¹⁰⁵

Investigators reported seeing large-scale machinery, akin to what is commonly employed in industrial agriculture, on large plots of soy and corn.

Besides the so-called intercultural settlers, Mennonite communities have emerged as a major force behind deforestation in Bolivia's Amazon.

Retaining their traditional clothing, strong Christian faith, and German dialect, Mennonite families arrived in Bolivia in the 1950s from Paraguay and Canada.¹⁰⁶ Their communities' expansion began in the 1960s, when Mennonites from Mexico joined them. Their population grew again in the 1990s, when more Paraguayan communities, seeking "an escape from modernization and land scarcity," migrated to Bolivia, according to a study of Mennonites in Latin America.¹⁰⁷ Most settled east of the city of Santa Cruz.

Mennonites have spread east and south in recent years due to their fast-growing populations. New communities have also formed in the northeastern corner of the country. According to the 2021 study, about 100 Mennonite communities farm more than 1 million hectares in Bolivia's lowlands.¹⁰⁸

Known for their diligence and farming expertise, Mennonite communities have fast sought new forests to raze.

"They are held in high esteem for their production level, for their honesty," said Vadillo, "but from the environmental point of view they have a way of working and producing that is highly destructive."¹⁰⁹

Mennonite farmers quickly deforest lands and raze trees in areas beyond permitted. Land clearings by the "Chihuahua" Mennonite community, about a five-hour drive northeast of Santa Cruz, have surrounded the neighboring village of San Miguelito, prompting townspeople and small farmers there to sell their lands.¹¹⁰ Their clearings have also encircled the San Antonio de Lomerío Indigenous territory.¹¹¹

Eulogio Núñez, director of Bolivia's INRA, has accused the "Valle Verde" Mennonite community, in the department of Santa Cruz, of spreading deforestation in state-owned lands.¹¹²

The land agency, though, has also permitted the expansion of Mennonite farms through its lax rules. In the region around Laguna Concepción, located about 230 kilometers east of the city of Santa Cruz de la Sierra, where Mennonites own some 167,000 hectares, the communities have obtained land under the pretext of being "agricultural communities," when in fact, they are engaging in commercial agriculture.¹¹³ They have also been blamed for digging canals that divert water and drain agrochemicals into the lake.¹¹⁴

Insular Mennonite communities – linked to soaring deforestation in Peru¹¹⁵ – have also eschewed laws when convenient. For example, one group built a network of roads and a bridge after purchasing some 15,000 hectares of land near the Kaa-lyá del Gran Chaco National Park.¹¹⁶ They constructed the 150-ton metal and concrete bridge over the Pareti River, whose wetlands are protected, without ever conducting an environmental impact study or consulting the national government.¹¹⁷

"There is a lack of control," said Quintanilla. "They do what the country allows them to do."¹¹⁸

Much of the recent deforestation in Santa Cruz has taken place on lands titled as medium-sized agribusinesses, farms of 500 to 2,500 hectares, and to a lesser extent those smaller than 500 hectares, according to the Earth Foundation report.¹¹⁹

The farms produce soy, beef, and other agricultural products on deforested lands. The buyers are commodities traders, who serve as intermediaries in a global supply chain.¹²⁰

Much of the land titled as smaller farms is partitioned merely as a "legal pretext" to launder and title large properties that might otherwise fall afoul of the law. Capital for production is provided by agricultural lenders, Brazilians, Mennonite communities, and others, according to the Earth Foundation.¹²¹

“That farmer that has 50 hectares... where is he going to get the money to clear? There is someone behind him,” said the agri-environmental expert.¹²²

A major culprit of deforestation is the cultivation of soybean, little of which is consumed domestically.¹²³ The vast majority is processed and exported to other South American countries, such as Peru, Argentina, and Brazil, used by the farming sector as livestock feed for chickens, pigs and other animals.¹²⁴

Soybean is Bolivia’s largest agricultural export. Between 2006 and 2020, exports of soybean and its derivatives brought in about US\$ 11 billion.¹²⁵ According to Bolivia’s main oilseed and grain trade group, land devoted to soybean cultivation tripled between 2005 and 2019, jumping from 429,000 hectares to nearly 1.4 million hectares.¹²⁶

About half a dozen commodities traders buy most of the soybean, according to Vadillo.¹²⁷ “They control and monopolize the whole system of collection and commercialization, and they are the ones that finance production,” he said.¹²⁸

Investigations in 2017 by Washington, D.C.-based environmental group Mighty Earth traced how major American commodities firms trade in soybean produced on deforested lands in Bolivia. The organization used satellite imaging and drones to find new land clearings for soybean cultivation and sent investigators to more than a dozen sites to identify their buyers.¹²⁹ According to the report, farm workers in Santa Cruz commonly cited US-based companies Cargill and Archer Daniels Midland (ADM).¹³⁰

In one example, about 1,000 hectares of forest were cleared on a Mennonite farm, about an hour away from the city of San Jose, to grow soybean, according to satellite images and interviews. Cargill admitted to sourcing soy from this farm,¹³¹ while ADM confirmed sourcing soybean from a different Mennonite community allegedly engaged in illegal deforestation.¹³²

As investigations continue to highlight how soy consumption in rich countries leads to the destruction of Amazon forests, international soybean traders have pledged to stop buying from suppliers that deforest.¹³³

Such agreements, though, have shortcomings. Much of the soybean exported from Bolivia is processed, in-country, into soybean cake and oil.¹³⁴ Small farms that grow soybeans on deforested lands will sell to larger farms for processing.¹³⁵

But supply chains in Bolivia are opaque. According to Trase, a research initiative that tracks commodity supply chains, Bolivia exported more than 7 million tonnes of soy from 2018 to 2020.¹³⁶ Six companies were responsible for 6.5 million tonnes of those exports.¹³⁷

Some of Bolivia’s biggest exporters have no public presence. Gravelal, which exported 1.3 million tonnes of soybean products in that period, has a sparse website. Hugo Spechar Gonzales Granos, which exported nearly a million tonnes of soy, has no website. Cargill was the largest soybean importer, at more than 1.5 million tonnes during this period.¹³⁸ As of this investigation’s publication, there have been no reports of any measures taken by the Bolivian government to address this situation.

“They finance the seed, they finance the machinery, they finance the agrochemicals, they even give technical assistance,” the agri-environmental expert said. “And with all that, then they give you a price.”¹³⁹

A Burning Issue: Bolivian Amazon Ablaze

In recent years, wildfires have scorched vast tracts of Bolivia’s Amazon. Skies have filled with smoke plumes, while otherworldly haze blankets Santa Cruz.

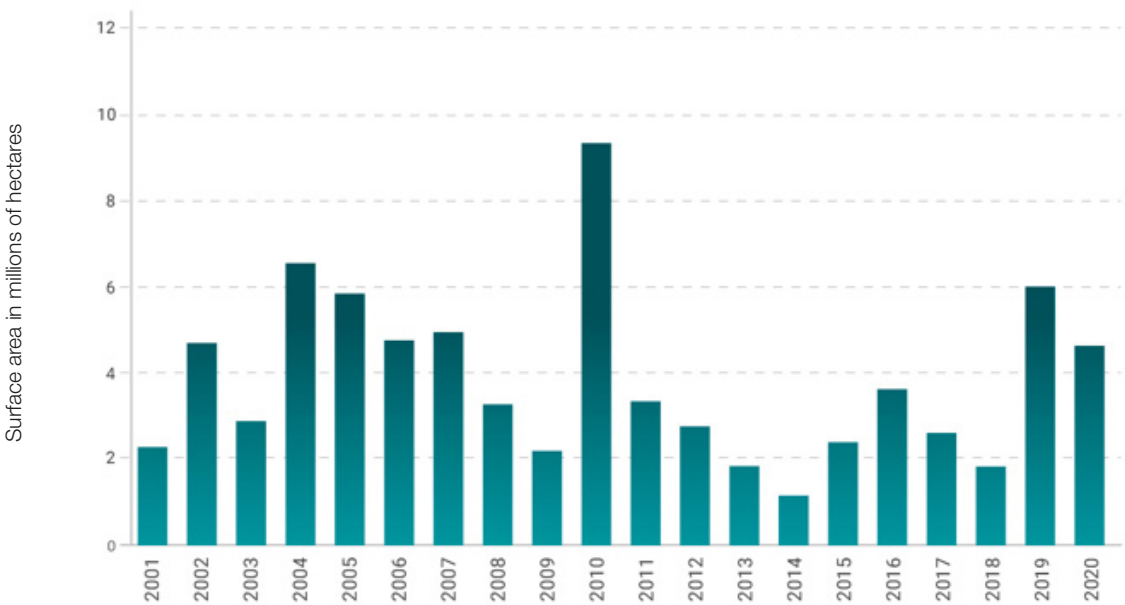
Since 2016, approximately 16 million hectares have burned.¹⁴⁰ Fires serve as a rapid yet destructive method for converting forests into land suitable for grazing or crop cultivation. Farmers ignite fires to burn desiccated trees and dry leaves from forests that were cleared earlier in the year. These fires burn intensely

and persistently, eventually clearing large areas of land.

“Where there is fire, there is no longer any vegetation. It becomes easy for the owner to cut down the big trees that remain standing,” Vadillo said.¹⁴¹

A significant turning point for these clearings occurred in 2019. In July of that year, then-President Morales enacted the Supreme Decree 3973 , which authorized “controlled fires” in Santa Cruz and Beni, Bolivia’s two most forested departments, to make room for ranching and boost beef production.¹⁴²

Bolivia's Annual Deforestation by Fire (2001-2020)



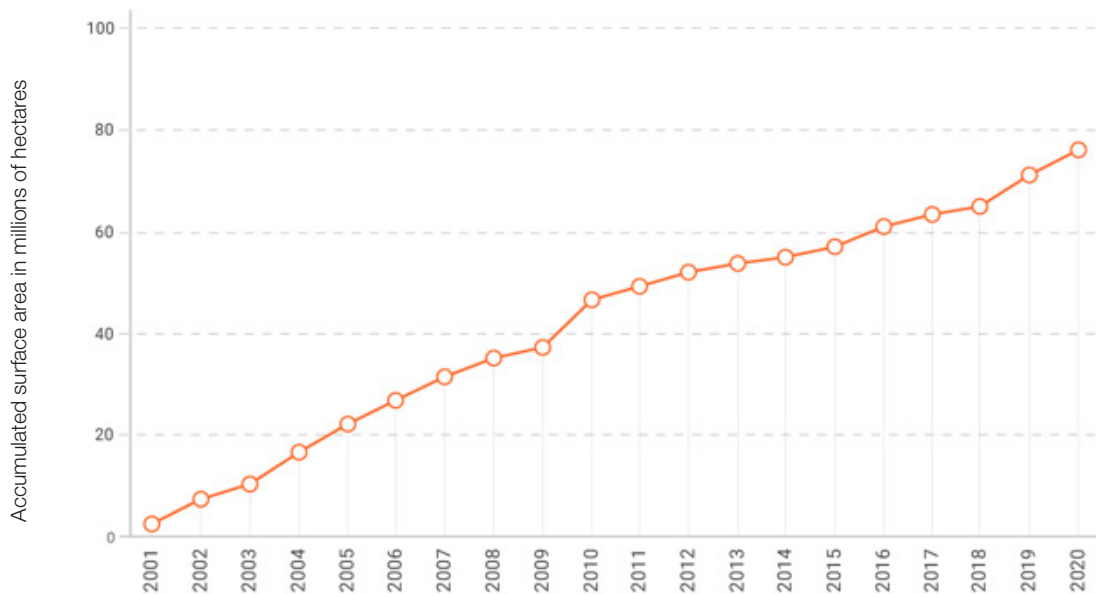
March 2024

Source: Friends of Nature Foundation (FAN).

insightcrime.org

In early August, some 560 fire outbreaks were recorded across Santa Cruz.¹⁴³ That number jumped to more than 15,600 in less than two weeks.¹⁴⁴ The fires raged for months, spiraling out of control. It was not until heavy rains arrived in October that the majority of them were extinguished.¹⁴⁵

Bolivia's Accumulated Annual Deforestation Rate by Fire (2001-2020)



March 2024

Source: Friends of Nature Foundation (FAN).

insightcrime.org

The human-caused infernos have continued every year since. For Vadillo, fires can mean only one thing: money. “These are economic interests ... where there was fire, businesses remain.”¹⁴⁶

In theory, setting fire to clear land without authorization from Bolivia’s forestry agency is illegal. But fines are less than a dollar for each hectare illegally deforested, ranging from between US\$ 5 and 20 cents per hectare.¹⁴⁷ And the imposition of fines is rare. In 2021, the forestry agency issued only 137 sanctions for illegal deforestation and 268 for illegal burning, marking a decrease from 2020, when the forestry agency issued 350 sanctions for illegal deforestation and nearly the same number for illegal burning.¹⁴⁸ “It is very cheap, fast, and easy. So, this means that many start fires,” Vadillo said.¹⁴⁹

Fines for illegal deforestation are set to change this year when a law passed in 2019 takes effect. Small- and medium-scale farms, which commit most of the illegal deforestation via burning, face fines of US\$ 7 and US\$ 19, respectively.¹⁵⁰ For comparison, illegal deforestation fines in Brazil, which has come

under global pressure to stop the burning of its Amazon, start at US\$ 970.¹⁵¹

“If we don’t have a form of regulation with stiff penalties, what are they going to do? They’re going to keep burning,” said Daniela Justiniano, who has long been on the front lines of battling wildfires in Bolivia’s forests.¹⁵²

Justiniano co-created Alas Chiquitanas, a volunteer group that uses donations to buy supplies for civilian firefighters. In October last year, she returned to Santiago de Chiquitanos, a town founded in the 1700s by Jesuit missionaries that sits in the heart of the Chiquitania forest. Justiniano has converted the town into an operations hub. There, even Senia Cabello, a local woman in her fifties, has become a volunteer firefighter. Cabello showed several selfies in the field, flames consuming brush behind her.

“The forests are lost because of the burning. The burning comes because of the felling of trees, of illegal clearing,” she said. “We feel cornered because there is nothing we can do to stop the deterioration of our forests.”¹⁵³

Protected Areas: Illegal Timber Strongholds in the Bolivian Amazon

For years in Bolivia, high-value woods like cedar and the mara variety of mahogany have been felled to feed domestic and international construction and furniture markets. But these valuable timbers have been harvested almost to the point of extinction. Now, trafficking networks and family clans are pushing deeper into the country's Amazon and protected areas, including national parks and natural reserves, where

remaining valuable species are supposedly protected. This rampant timber trafficking is contributing to deforestation, biodiversity loss, and environmental degradation.

Julio Zebers, an environmentalist and volunteer firefighter, surveyed trees that still smelled of smoke.¹⁵⁴ Two weeks had passed since a blaze raced through this stand of Bolivia's Chiquitania forest in Valle de Tucabaca, a nature reserve in Santa Cruz. A huge trunk of *almendro*, a tropical hardwood, lay on the ground, freshly cut. Its outer bark was charred. But the wood inside was intact. "This forest was burned for the wood," Zebers explained.



Julio approaches one of the burned trees evidencing the recent fire. Santiago de Chiquitos, Bolivia, October 2022. Photograph by Juan Diego Cárdenas, InSight Crime.

He noted that the fires provide illegal loggers with access to stands of valuable hardwood located deep inside the reserve, areas that would normally be inaccessible. While these ancient trees can survive the fires, they are defenseless against the assault of teams armed with chainsaws.

Illegal logging in Bolivia's forests feeds both domestic and international timber demand. The extent of the black market remains unclear. However, the US-based nonprofit Forest Trends, known for its assessments of timber products' legality on a country-by-country basis, classified Bolivia as a "higher-risk" country in its 2021 survey. This classification stems from "widespread illegal logging" and "reports of illegally harvested Bolivia timber being trafficked."¹⁵⁵

Natural reserves are particularly susceptible to the encroachments of illegal loggers, as reported by Eduardo Franco Berton, a Bolivian environmental journalist who has investigated the illicit timber trade.¹⁵⁶ Parks at risk include Madidi, Carrasco, Ambaró, and Isiboro-Sécure, all of which are adjacent to the Amazon region.¹⁵⁷

In Madidi and Ambaró, an entire trafficking network has sprung up around the pilfering of valuable mara wood (*Swietenia macrophylla*), also known as big-leaf mahogany.¹⁵⁸ The tree species – utilized in the production of luxury furniture, paneling, and musical instruments – has been classified as "vulnerable" on the International Union for Conservation of Nature (IUCN) Red List.

It has also been granted Appendix II protection under the Convention on International Trade in Endangered Species (CITES), indicating that its trade must be regulated to prevent exploitation that threatens its survival.¹⁵⁹ "In the 80s and 90s, there was a very high demand for legal and illegal extraction," Berton said.¹⁶⁰

In 2011, the head of Bolivia's forests agency warned that the overexploitation of mara wood had left the species on the brink of disappearing.¹⁶¹ According to an investigation by Berton, first published in *Mongabay*, traffickers are still financing the extraction of mara wood.¹⁶² The pilfering requires organized crews that head deep into national parks, crossing rivers and canyons, to reach isolated stands of mara trees.

Loggers, referred to as *corteros* or cutters, chop down trees that can reach up to 45 meters in height and then use buzzsaws to cut them into planks measuring 3 to 5 meters in length.¹⁶³ Carriers, known as *lomeadores*, then transport these planks on their backs for up to two miles across challenging terrain.¹⁶⁴

Once the carriers reach a river drop-off point, the timber is strung together by rope to form long rafts called *callapos*.¹⁶⁵ The rafts carry 150 planks on perilous journeys up to three days on Amboró's Yapacani, Ichilo, and Mataracu rivers. The trips can earn *callapero* sailors some US\$ 700.¹⁶⁶

Trucks then pick up the timber, bringing it to warehouses. According to Berton, to extract a shipment of mara from Amboró can take up to a month.¹⁶⁷

The best wood is selected and smuggled to neighboring countries. From Madidi, located northwest of La Paz, the wood is moved to San Pedro de Putina Punco, Peru, while wood extracted in Amboró is moved across the long porous border between Bolivia and Brazil's Mato Grosso state. The timber is often concealed in other truck cargo.¹⁶⁸

Timber that reaches Brazil and Peru has been exported to international markets, such as China and the United States.¹⁶⁹ Lesser-quality wood feeds domestic black markets.¹⁷⁰ "It's completely structured," Berton said. "A few family clans manage it."¹⁷¹

Other tree species, though less valuable than mara, are being illegally extracted. These include, among others, morado (*Machaerium scleroxylon*); cedrillo, or Spanish cedar (*Vochysia viciifolia*); tajibo (*Tabebuia impetiginosa*); and quinoa colorada (*Myroxylon peruiferum*).¹⁷²

Besides outright smuggling, timber traffickers insert illegal wood into the legal supply chain through doctored Forestry Origin Certificates (CFO). In 2021, the timber industry in Bolivia managed to export 143,000 tonnes of wood, worth about US\$ 96 million.¹⁷³

Clearing plans, called PDM-20s and allow for the removal of 20 hectares of forest, have been used to cover up the illegal harvesting of trees on protected or state-administered lands.¹⁷⁴ Inefficiency and outright corruption in Bolivia's forestry agency, ABT, facilitate this process.

To cite one example, René Noel Sivila Céspedes, the head of a forestry unit that oversaw some 80,000 hectares in Santa Cruz's San Ignacio de Velasco, allegedly received kickbacks to allow the clearing of more than a quarter of the reserve near the border with Brazil.¹⁷⁵

During the tenure of Sivila Céspedes, approvals for PDM-20 were sold for US\$ 300 each.¹⁷⁶ This led to the falsification of hundreds of forestry certificates, facilitating the laundering of lumber equivalent to approximately 400 truckloads. Between 2015 and 2018, this illegal logging network generated around US\$ 6 million.¹⁷⁷

Local sawmills owned by intercultural communities and Chinese nationals also process illegally harvested timber, according to Alex Villca Limaco, communications secretary at CONTIOCAP.¹⁷⁸



A tree cut down and about to be sawed lies in the forest of Valle de Tucabaca after a fire. Santiago de Chiquitos, Bolivia, October 2022. Photograph by: Juan Diego Cárdenas, InSight Crime

Zebers said the trees chopped down in the burnt-over forests of Valle de Tucabaca were likely meant for local housing construction, noting that it is used for internal beams and window frames. "There is still good wood all around here," Zebers said. "Since there is no control, they grab trunks like these and start cutting."

DRUG TRAFFICKING CREEPS INTO BOLIVIA'S AMAZON NATIONAL PARKS

Bolivia is the world's third-largest producer of coca, after Colombia and Peru, and a key crossroads for cocaine and other drugs. Coca crops are grown legally across 22,000 hectares in the Yungas region and the Cochabamba Tropics. However, coca plantations are spreading outside these regions into remote corners of Bolivia's Amazon as farmers attempt to meet the international demand for cocaine.

Although coca cultivation and drug trafficking are not main drivers of deforestation in Bolivia, they still contribute. Drug traffickers are clearing forest in national parks to grow coca, and to build cocaine laboratories and illegal airstrips.

Amid the dense wilderness of the Bolivian Amazon lurks the superstructure of a billion-dollar business. Bright green coca sprouts in clearings, workers sweat in artisanal laboratories, and unmarked Cessnas land and take off again. It is hard to tell from the compacted kilos, but alongside beef, soy, and gold, cocaine is contributing to habitat destruction and biodiversity loss.¹⁷⁹

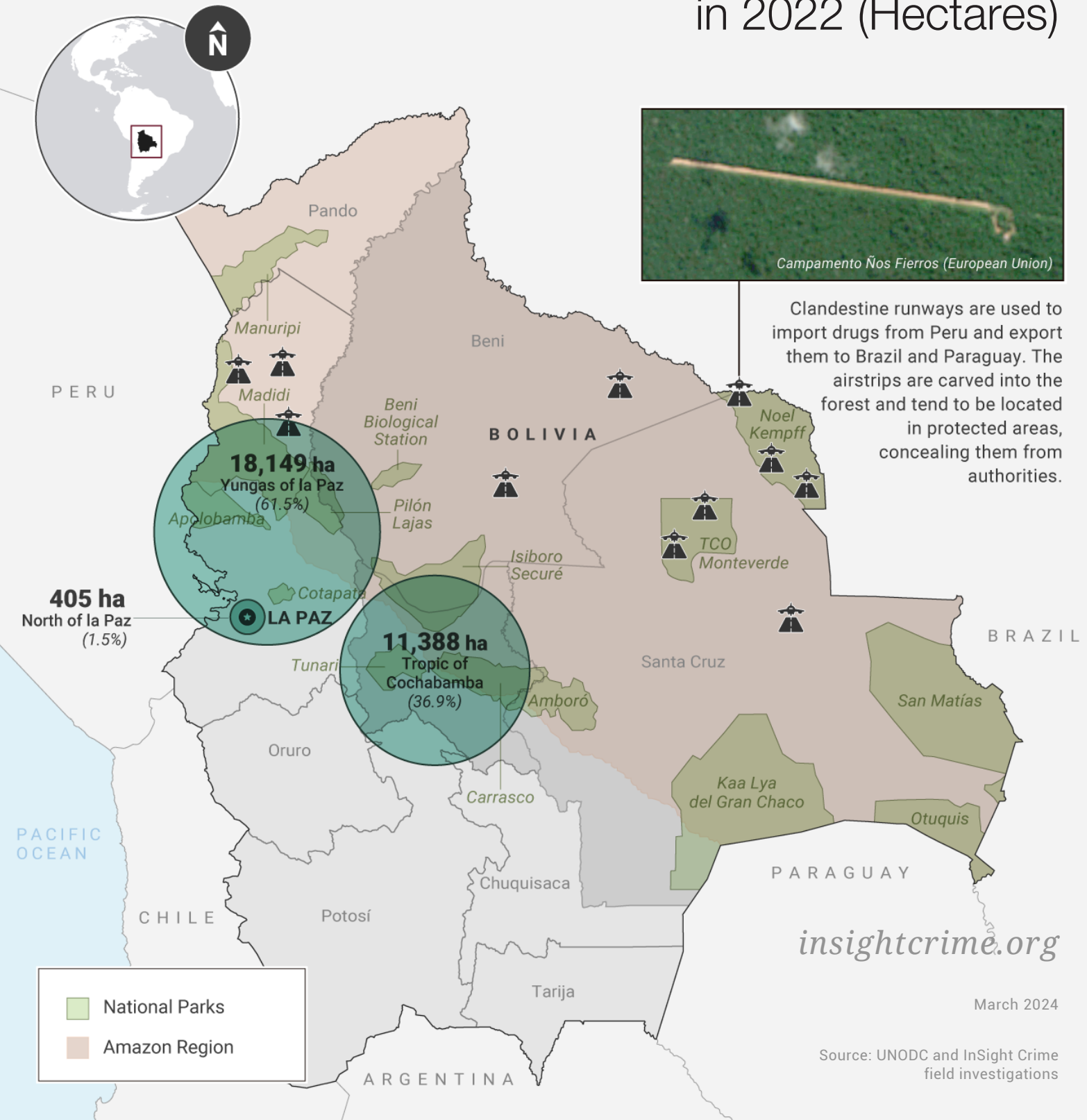
"The creation of airstrips and trails, and planting of new coca crops are driving forces that in the medium and long term will further increase deforestation," said FAN director of research Quintanilla.¹⁸⁰

It starts with coca. Year after year, the area under coca cultivation in Bolivia continues to grow. According to the US State Department's 2023 International Narcotics Control Strategy Report, the country reached 39,700 hectares of coca cultivation in 2021.¹⁸¹ However, there are significant discrepancies between how much coca the White House estimates is grown in Bolivia, versus numbers from the United Nations Office on Drugs and Crime (UNODC). The latest monitoring by the UNODC said Bolivia closed 2021 with 30,500 hectares of coca.¹⁸² This represented an increase of 4% compared to 2020, which closed with 29,400 hectares.¹⁸³ Around 62% of the area under coca cultivation was in the Yungas region of La Paz, 36% in the Tropic of Cochabamba, and 2% in the North of La Paz. All these areas border the Bolivian Amazon.¹⁸⁴

In 2022, the country registered 29,900 hectares of coca, a reduction of 1.9% compared to 2021, according to the latest UNODC report. Of those 29,900 hectares, over two-thirds are legal. About 22,000 hectares of permitted coca are grown in the Yungas region and the Tropic of Cochabamba, in the north of Bolivia's central department.¹⁸⁵ However, the remaining one-third is illicit, with those 7,900 extra hectares having been planted in illegally deforested land.¹⁸⁶

Coca Cultivation in Bolivia

in 2022 (Hectares)



Cheap coca also comes from Peru to be processed in the Amazonian departments of Beni and Pando, according to Iván Paredes, an environmental journalist based in La Paz.¹⁸⁷ Often though, the product arrives already processed, either as coca paste or cocaine

base requiring further refining in laboratories, or as cocaine hydrochloride awaiting re-export.¹⁸⁸

Both scenarios require illegal airstrips. Hacked out of the canopy, these clandestine landing spots are scattered across the landscape.

“In those areas north of La Paz, which is already the connection with Beni and Pando, several narco-airstrips have been identified,” Paredes said. “Some of them are in the Madidi Park, which is a [protected] area where gold mining takes place.”¹⁸⁹

Others are allegedly hidden in the Noel Kempff National Park, in the northeastern part of the department of Santa Cruz, according to Quintanilla.¹⁹⁰

These national parks are a target for drug trafficking infrastructure, not only because they are in remote areas where it is difficult to carry out security operations, but also because they are located on the borders with Peru, another cocaine-producing country, and Brazil, one of the main gateways for drugs heading to Europe.¹⁹¹ Indigenous reserves are a particularly attractive target. Quintanilla told InSight Crime that satellite images have identified numerous airstrips in the Monteverde Community Land of Origin (Tierra Comunitaria de Origen - TCO), a protected area that is home to 128 indigenous communities.¹⁹²

If the imported drugs are processed in Bolivia, it is often within or near national parks. In the Santa Cruz department, drugs are processed in Carrasco and Amboró national parks, said Saúl Lara, deputy for Cochabamba in Bolivia’s Legislative Assembly and member of the security and anti-drug committee.¹⁹³

According to Lara, the cocaine industry has taken root in the towns around these parks, such as San Germán, Bullo Bullo, Yapacaní, and Ivigarzama.¹⁹⁴ One drug trafficking analyst, who asked to remain anonymous for security reasons, suggested this shows a worrying increase in Bolivian involvement in the drug trade.

“The reserves have been invaded. And not only by coca plantations, but also by refining laboratories for cocaine base. Before they didn’t refine [in Bolivia],” he said. “Now with Colombian technology and know-how, which is the best in the world, they refine with microwaves, with dryers... Now they put in a million dollars to get 500 kilos a day.”¹⁹⁵

Laboratories tend to be concealed under tree cover, so their environmental impact does not come from deforestation, but rather from the dumping of chemical residues into rivers and, to a lesser extent, on land, explained a Bolivian drug trafficking expert who spoke on condition of anonymity for security reasons.¹⁹⁶

The pollutants alter the PH and oxygen levels of the rivers and harm the soil’s fertility, killing animals and plants.¹⁹⁷ Both have repercussions for local communities that depend on these ecosystems for their survival.

“The laboratories are always next to rivers because these act as the dumps where all the chemical waste necessary for cocaine production is discarded,” the expert said.¹⁹⁸

GOLD MINING: A STATE-SANCTIONED SCOURGE IN BOLIVIA

Bolivia is in the midst of a gold rush caused by record gold prices and growing international demand. This gold rush has been facilitated by permissive mining regulations that blur the line between legal and illegal.

The spread of mining throughout the country and the broader Amazon in the last few years has left deep environmental scars. Mining has become one of the main drivers of deforestation and is threatening protected areas and native communities.

Unlike other Amazon countries, such as Peru and Colombia, the main mining players in Bolivia are mining cooperatives. Their economic and political power, and the loosely regulated national industry they operate in, have emboldened them to expand their mining operations to the most remote corners of Bolivia's Amazon, including protected areas. But their operations are too often associated with flagrantly illegal acts, as they operate without environmental license or in alliance with dubious Chinese and Colombian companies.

Prospectors are tearing up Bolivia's Tuichi River in search of gold. The waterway descends into Madidi National Park, a natural wonder, home to more than 1,000 species of birds and some 200 species of mammals.

As the miners have grown more brazen in breaching the reserve, patrols by park rangers have been cut back, said Marcos Uzquiano, Madidi's former director.¹⁹⁹ When rangers do head out, they reduce their inspections to merely noting illegal activity, such as cylinders of diesel fuel being carried in. But lately they fear doing even this, after having received threats. In certain sections of the park, the miners "decide who enters," Uzquiano said.²⁰⁰

"We have reached a point where all authority has been lost," said Uzquiano, who was transferred from his post after speaking out about the situation.²⁰¹

Using heavy machinery that includes backhoes, dump trucks, and front-end loaders, the miners level embankments and dig pits.²⁰² Mounds of rubble are left behind, and the once-clear river has become choked with silt, Uzquiano said.²⁰³

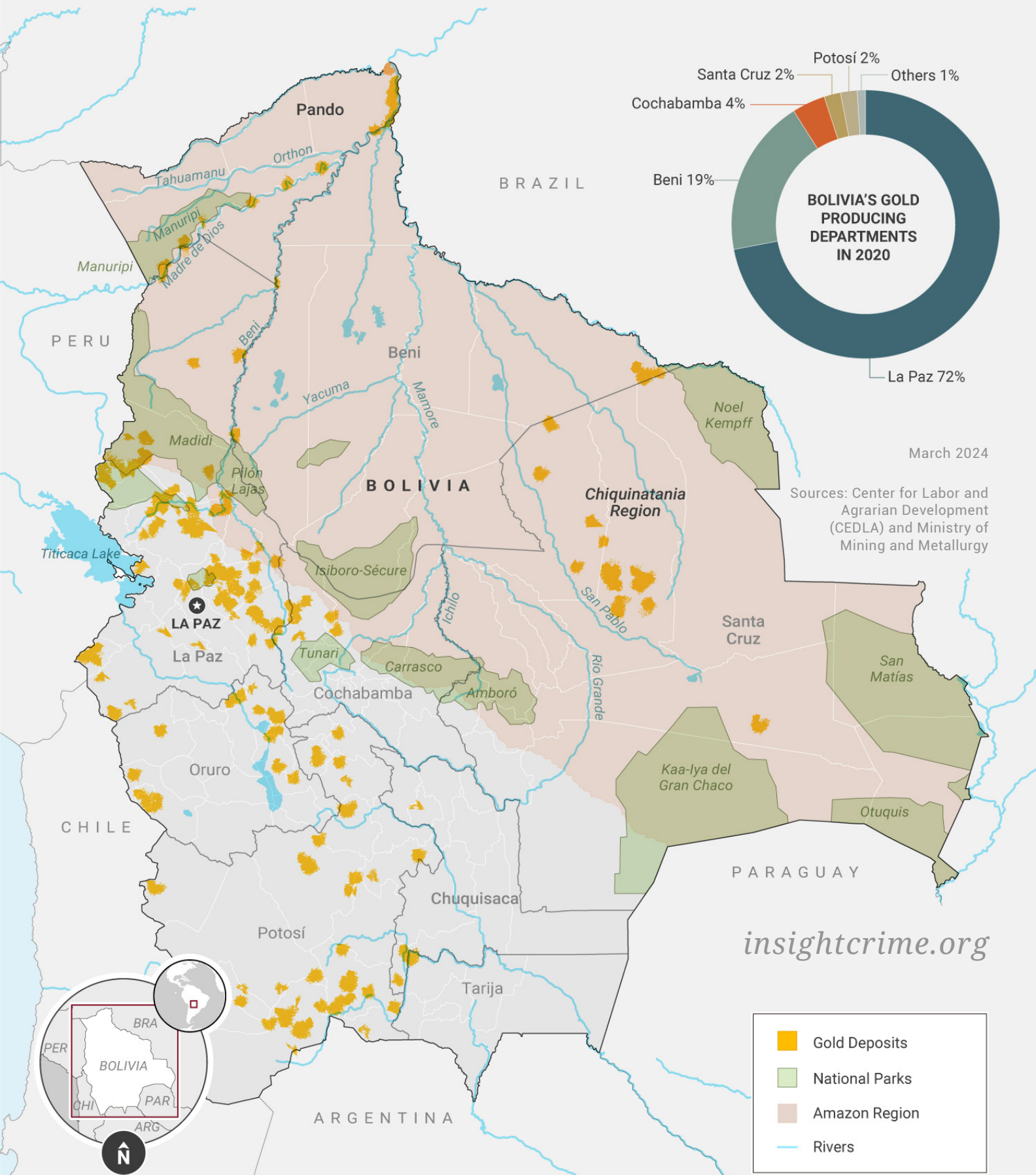
"All the mining waste is being dumped directly into the river without any mitigation measures," he said.²⁰⁴ The waste, also known as tailings, includes toxic mercury used in the separation of gold. "It's completely out of control," Uzquiano said.²⁰⁵

Bolivia's government, though, has not stopped the plunder, despite having established the reserve in 1995 to form one of the world's most biologically diverse protected areas. Rather, it has encouraged gold mining, handing out concessions within the reserve, which runs along Bolivia's upper Amazon River Basin.²⁰⁶

Bolivia is in the grips of a gold boom, stoked by soaring prices. Eight of Bolivia's nine departments produce gold.²⁰⁷ Gold production came from 6.3 tonnes in 2010 to 42 tonnes, worth about US\$ 1.7 billion, in 2019.²⁰⁸ Between 2010 and 2021, Bolivia exported 240 tonnes of gold. The previous decade it exported just 70 tonnes.²⁰⁹ The open secret is that Bolivia's gold rush is fueled by its having virtually no controls on the mining, sale, or export of the precious metal.

"There is no monitoring, from the operator at the site all the way to commercialization," said Alfredo Zaconeta, a mining researcher at the Center for Labor and Agrarian Development (CEDLA).²¹⁰

Gold Deposits in Bolivia



Digging Into Gold Mining Cooperatives

Nearly all of Bolivia's gold is produced by small-scale mining cooperatives, known locally as *cooperativas*. These sometimes act like mafias. Politically powerful, the cooperatives have been known to hold the government hostage, to corrupt and coerce mining agency officials, and to have shady dealings with Colombian and Chinese mining outfits.²¹¹ These miners enter protected areas and employ destructive techniques, including using wildcat equipment such as excavators, massive dredges, and poisonous mercury.²¹² They operate in a near state of impunity, thanks to gray areas in Bolivian law and little oversight by the government's mining agency, the Jurisdictional Mining Administrative Authority (AJAM).²¹³

"There is a level of flexibility and exceptions ... that give the cooperative mining sector the possibility to really behave like an illegal miner," said Oscar Campanini, who has investigated mining as director of the Documentation and Information Center Bolivia (CEDIB), a non-profit organization that reports on social issues.²¹⁴

Though they existed even earlier, mining cooperatives emerged in the 1980s after the dissolution of Bolivia's state-owned mining company, Comibol.²¹⁵ Made up of unemployed miners, the cooperatives were provided mining concessions in abandoned shafts or on pieces of land for little money.²¹⁶

A boom in mineral prices beginning in the 1990s caused Bolivia's mining cooperatives to surge in number. In recent years, gold cooperatives have led the charge. In 2010, there were 459 registered gold cooperatives in the La Paz department.²¹⁷ By 2019, that number more than doubled to 1,230.²¹⁸

According to CEDLA researcher Zaconeta, the cooperative sector controls 94% of the country's national gold production.²¹⁹ The remaining percentage is in the hands of the private and state sectors. Unlike in neighboring Peru, there are few big foreign-owned mining firms.²²⁰

The cooperatives are supposed to be collaborative ventures in which each member is a *socio*, or partner. The reality is that they are often owned or controlled by families or small groups. Many of their individual members remain poor, while cooperative leaders consolidate power and wealth.

On a national scale, the mining cooperatives are organized under larger federations. Most of them operate in La Paz department, but also in Bolivia's Amazon region.²²¹ These include the North La Paz Mining Cooperative Federation (FECOMAN), the Regional Mining Cooperative Federation (FERRECO), and the Bolivian National Mining Cooperative Federation (FECOMIN).²²² A 2014 paper on the cooperatives described FECOMIN as cloaking itself in "discourses about ideological alliances and mutual support, while it blackmails and coerces the government."²²³

The cooperatives supported former President Evo Morales (2006-2019) when he came to power. They backed Morales during much of his tenure, and he rewarded them with political posts.²²⁴ But they also bent him to their will – often through massive demonstrations – whenever the government dared to defy their interests, like increasing taxes or limiting mining concessions. In 2016, protesting mine workers kidnapped and beat to death Bolivia's deputy interior minister, Rodolfo Illanes, amid an escalating conflict over mining legislation.²²⁵

The government pursued those responsible for the murder of Illanes, but there was no strong implication for the cooperative sector. In fact, today, the cooperatives continue to play an important role in the government and in the ruling party, Movimiento al Socialismo (MAS), while also maintaining the ability to mobilize members to further their interests.²²⁶

"They evidently have a political presence that has allowed them throughout these 15 years to direct and define part of the actions, legal norms and policies on the issue of mining," Zaconeta said.²²⁷

Gold Cooperatives in Bolivia

As gold prices have increased, the number of gold mining cooperatives has surged. They now control 94% of the country's gold production.



Sales tax

The cooperatives pay preferential tax rates on gold sales thanks to the political influence they wield.



The government mining agency imposes few limits on them. Some can mine while a permit is still pending.



85%

of the cooperatives operate without an environmental license

Many mine beyond the limits of their concession, encroaching on protected and Indigenous lands.



The cooperatives have also illegally partnered with foreign mining organizations, giving them access to their mining concessions.

Bolivian cooperatives subcontract Chinese and Colombian companies, which provide capital, heavy machinery, fuel, mercury, and labor. In this context, cooperatives are nothing more than front companies.



March 2024

One measure of cooperatives' political power can be seen in the excessively low royalties on gold. Bolivia's government levied just a 2.5% royalty on the gold they mine. Even that amount was not always paid, Zaconeta said.²²⁸ Figures from 2021 indicate that royalties on gold came to just 2.2% that year, according to Zaconeta.²²⁹ After a tense negotiation in October 2022, the mining cooperatives and the government agreed to pay another special tax of 4.8% on the gross sale of gold.²³⁰ By March 2024, this initiative has not been approved, but if approved, the cooperatives would have to pay 2.5% in royalties and the additional 4.8% in special taxes.²³¹

What's more, the legal framework around mining, established by Law 535 in 2014, makes the cooperatives almost unaccountable. Cooperatives need merely to have requested registration as a legal entity to receive a mining title, or Administrative Mining Contract (CAM).²³² Certain cooperatives established prior to 2014 can continue to mine, including in protected areas, while a request for a contract is in progress.²³³

Bolivia's mining agency, AJAM, is willfully ignorant at best – and at worst complicit – in giving free rein to the cooperatives. Mining concessions have been granted within protected areas in the Amazon. Little to no inspection is done to ensure that cooperatives constrain extraction to 25-hectare concessions.²³⁴ And some 85% of cooperatives operate without any environmental licenses at all.²³⁵

Foreign nationals often underwrite mining operations. A Bolivian cooperative receives the mining contract, while heavy machinery and workforce are paid for by outsiders who take up to 80% of the profits.²³⁶ Such dealings violate both the country's constitution and mining laws, Zaconeta said.²³⁷ Mining cooperatives often merely act as fronts for foreign operators.

Rafts and Backhoes Plunder Amazonian Rivers

Dredging rafts operating in Bolivia's Amazon waterways openly vacuum up mud to capture gold particles. These barges, mostly managed by Chinese and Colombian miners, can span two or three stories in height and are equipped with enormous pumps and high-pressure hoses to dredge the riverbed. Concurrently, backhoes are used to excavate riverbanks for additional gold.

These illegal rafts have infiltrated the extensive Beni River and its tributaries in the lowland Amazon region, including the Challana, Tipuani, Mapiri, and Kaka rivers.²³⁸

Jimena Mercado was among the first Bolivian journalists to report on the presence of the dredges in the Amazon region. She said they had already begun "to besiege" Madidi in 2018, when she traveled to the region.²³⁹

Officials in nearby towns were alarmed, Mercado said.²⁴⁰ In her book *Tras el Dorado. Crónicas de la explotación del oro en la Amazonía* (After El Dorado. Chronicles of Gold Exploitation in the Amazon), Mercado described that she spoke with Edwin Peñaranda, a former council member for the riverside town of Teoponte. Peñaranda had become so concerned about the influx of Chinese illegal miners damaging the waterways that he corresponded with the AJAM to find out whether it had contracts with any Chinese miners.²⁴¹

The AJAM did not, but the cooperatives did. Mercado saw contracts between what she described as Chinese individuals and a wealthy cooperative owner with three dredges docked in Mayaya, just upriver from Teoponte.²⁴²



Mining Dredging Raft in Bolivia's Amazon. Photograph by Miguel Roca, *Mongabay*.

Although foreign companies are prohibited from participating in the mining sector in Bolivia,²⁴³ Chinese and Colombian miners partnered with cooperatives that already have mining plots legally assigned to them to extract gold, said Zaconeta.²⁴⁴ They subcontract the mining operations, providing equipment, fuel, and mercury.²⁴⁵ They also hire laborers, which cooperatives – by their very nature – should not need.²⁴⁶

Some Chinese and Colombian companies have created “armed militias” to protect their operations, Mercado said. Shooters control some 50 mining plots around the village of Arcopongo, in central La Paz, she said.²⁴⁷

The gold rush has also brought human trafficking to the Bolivian Amazon. In the towns of Mapiri, Guanay, and Ixiamas, bus terminal walls are plastered with photographs of missing women and girls.²⁴⁸ Some are lured to these mining towns with false promises of work as cooks, waitresses, or nannies.²⁴⁹

Others are kidnapped, said Mercado, who recently spoke with a girl who was 8 years old when she was taken. She was among a group of 40 girls who were being sexually exploited in Mapiri, Mercado said.²⁵⁰

Exporters Whisk Away Gold

Bolivia has long seen its mineral riches removed to foreign lands. During the Sixteenth Century, silver mined in Bolivia bankrolled the Spanish crown and made its way into the jewelry of Arab kings and the treasures of Ming dynasty emperors.²⁵¹

Gold is still exported today, but amounts have fluctuated wildly in recent years, jumping from 8 tonnes in 2013 to 36 tonnes the following year. Although it is not known how much gold is of illegal origin, “the drastic oscillations tell you something is wrong,” said Zaconeta.²⁵²

Exports have also exceeded national production. In 2012, Bolivia exported some 27 tonnes of gold, about 15 more tonnes than it officially mined.²⁵³ Similarly, an extra 10 tonnes were exported in 2014. Zaconeta said the inflated gold exports suggest that illegally sourced gold, likely from Peru's Amazon, is being laundered in Bolivia.²⁵⁴

Gold extracted by numerous rafts along the Brazilian Madeira River, which connects the state of Rondonia with Beni, is also laundered, and traded in Bolivia, according to an investigation by Peruvian news outlet *Ojo Público*.²⁵⁵

Gold passes through various hands, and sources are mixed prior to export, providing many opportunities for laundering. Individuals, including cooperative members, sell to gold shops that have sprung up around mining sites.²⁵⁶ A single miner can legally sell up to 2 kilograms per month, fetching up to US\$ 62,000. Buyers need only see an identity card.²⁵⁷

Export companies purchase gold from these buyers, as well as from cooperatives. Approximately two dozen export companies are registered with the government. The law requires that these companies submit affidavits to Bolivia's National Minerals and Metals Industry Registration and Control Service (Senarecom), documenting the provenance of the gold being exported and payment of taxes.²⁵⁸

The source of the gold, in theory, is identified through mining identification numbers, which gold prospectors and sellers must obtain in order to operate legally.²⁵⁹ But the mining numbers and gold sources are self-declared at the time of sale, and Senarecom has no effective way to track the information provided.²⁶⁰

The lack of oversight permits both gold buyers and exporters to falsely document titles, entities, and gold sources. This allows for the free movement of gold among cooperatives. Regulated as small-scale operations, most gold cooperatives are restricted to selling 20 kilograms per month.²⁶¹ To get around this, a cooperative extracting more gold will transfer it to another – in effect laundering it.²⁶²

For example, an estimated 31 tonnes of gold were produced in 2018 in all of Bolivia.²⁶³ About half was supposedly mined in the Beni department, despite having only 20 cooperatives registered there, according to Zaconeta.²⁶⁴ Gold is also sourced to fake cooperatives and mining numbers.

"There is no follow up," Zaconeta said of Senarecom's inspection activities. "The only thing the state does is to hold on to the declarations made by the operators."²⁶⁵

Unscrupulous international buyers contribute to the problem. Since 2017, buyers in India and the United Arab Emirates have accounted for more than three-quarters of Bolivia's gold sales.²⁶⁶ This was an abrupt shift from 2016, when US companies bought more than half of the country's gold. The switch came shortly after US metal dealers were scrutinized for buying gold of suspect origin exported from Bolivia as metal waste.²⁶⁷ It also came after a broad crackdown by US prosecutors on imports of gold mined illegally.²⁶⁸

Exporters have since turned to buyers in India and Dubai, who pay quickly and ask few questions, according to experts.²⁶⁹ Exporters themselves have been caught taking gold out of the country illegally. In December 2020, at the El Alto airport in La Paz, authorities seized 331 kilograms of gold, worth US\$ 18 million, en route to Dubai.²⁷⁰

The exporter, Goldshine SRL, allegedly falsified documents to avoid taxes. After the seizure, prosecutors opened an investigation against the company's owner, Amit Dixit, on charges of illegally buying and selling mineral resources and making false declarations.²⁷¹

Despite the cloud of suspicion around Dixit, Bolivian prosecutors ordered the confiscated gold returned to him the following year. They also shelved the case. In March 2022, the senate held a hearing during which the head of Bolivia's mining agency told legislators Dixit had fled the country, taking the gold with him.²⁷² While under investigation, Dixit also managed to export another 278 kilograms of gold, officials revealed.²⁷³

Bolivia has asked INTERPOL to put out an alert for Dixit's arrest, but nothing has come from it so far. Opposition Senator Cecilia Requena called the investigation a disaster.²⁷⁴ "We all have lost," she said. "The corrupt have won."²⁷⁵

Madidi: A Paradise Lost?

In 2000, National Geographic magazine celebrated the creation of Madidi, which it called Bolivia's "spectacular new national park," with a cover image of two red macaws in flight. Now the reserve serves as a grim illustration of the destructive power of Bolivia's gold miners.

According to Madidi's management plans, the area where resource extraction is permitted in the park increased nearly 65% from 2006 to 2014.²⁷⁶ Marcos Uzquiano, Bolivia's park ranger, said he recalled some 53 mining concessions within the park in 2013.²⁷⁷ In 2021, when "we revised the grids again," there were "100 concessions" inside the park.²⁷⁸ "That has been increasing year after year," Uzquiano said.²⁷⁹

Late last year, Bolivia's mining agencies and the cooperative federations hatched their latest agreement, allowing for the increase of mining rights in Madidi and two other reserves, Cotapata and Apolobamba.²⁸⁰

When the backdoor deal became known, a group representing Indigenous rights had people from across ten Indigenous territories march to and take over the offices of Madidi and the Pilon Lajas Biosphere.²⁸¹ The outrage caused the government to quickly annul the agreement, in October 2022.

Such rare victories matter little when there is no one to guard Madidi from miners illegally entering its protected areas. "The park rangers in Madidi at the moment are completely alone," Uzquiano said.²⁸²

THE POISONOUS MERCURY TRADE

Mercury, employed by miners to extract gold from soil and sediment, is smuggled daily in bottles across Bolivia's borders with Peru and Brazil, reaching numerous illegal mining hotspots through the Amazon Basin.

The uncontrolled disposal of mercury waste, especially from small-scale mining throughout the Amazon, contaminates the air, rivers, and fish that many local communities eat. People who breathe this air and consume these fish are gradually being poisoned.

Several countries in the Amazon have cracked down on toxic metal imports as part of the Minamata Convention on Mercury. This United Nations-based international treaty seeks to reduce the environmental and health impacts of mercury's use in mining. But Bolivia has

implemented virtually no reforms despite ratifying the convention in 2016. As a result, the country has become the main entry point for mercury into Latin America and a key hub for its trade.

Mercury comes in small white bottles, stamped with a bullfighter, and labeled "*El Español*," meaning "the Spaniard." A kilogram costs about US\$ 260, and a gram for just under a dollar.²⁸³

The liquid metal is not hard to find, sold by rows of gold buyers on Tarapacá Street in downtown La Paz. Reporters from La Nube, a Bolivian online investigative news outlet, discovered that certain storefronts were releasing smog as a result of mercury being burned off during the gold refining process.²⁸⁴



Mercury 'El Español' packed in plastic bags on Tarapacá Street, La Paz. Photographs by Carlos Sánchez, La Nube

By joining the Minamata Convention, many Amazon countries have tried to curb the use of the poisonous metal in small-scale mining.²⁸⁵ Bolivia is among the more than 100 countries to sign and ratify the convention in 2016. However, at the same time, its failure to restrict mercury's imports²⁸⁶ has turned the country into a hub for mercury imports to support its booming gold production and that of Brazil and Peru.²⁸⁷

Since 2015, the country has ranked first or second in the world in importing the toxic chemical, trailing only India at times.²⁸⁸

Between 2016 and 2021, the country imported more than 1,100 tonnes.²⁸⁹ For comparison, Brazil imported around 100 tonnes during that same period.²⁹⁰ Between 2014 and 2021, Peru decreased its formal mercury imports by 95%.²⁹¹

Bolivia Mercury Imports, 2009-2022

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020(p)*	2021(p)*	2022(p)*
Weight (t)**	0	1.71	8.71	15.84	9.27	12.70	151.50	238.33	197.83	210.38	192.88	165.15	106.15	7.31
Price (USD)***	0	0.04	0.20	0.60	0.56	0.52	6.89	6.40	3.28	4.17	9.49	7.69	5.21	387

(p): Preliminary

*The slight decrease in mercury imports in 2020 was due to the COVID-19 pandemic

**Tonnes

***Millions of US dollars

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March 2024

Source: National Statistics Institute (INE)

The mining sector imported around 84% of the mercury that arrived in Bolivia between 2014 and 2018. The chemical and textile industries imported the rest, according to a study conducted by CEDIB director, Oscar Campanini.²⁹² This means that in Bolivia, unlike other Amazon countries, mercury is imported directly for gold mining, with no need to divert it illegally from other industries like dentistry, science, and research.²⁹³

The country's excessive trade in the toxic metal has been facilitated by Bolivia's failure to implement the majority of controls recommended by the Minamata Convention for regulating mercury importation. Such recommendations include the prior registration of importers, declarations of amounts to be imported, and consents from customs to receive shipments.²⁹⁴ Bolivia's customs agency does not require special certification to import mercury.²⁹⁵ "In Bolivia, it is easier to import mercury than to import books or medicines," Campanini said.²⁹⁶

It was not until June 2023 that the government launched Supreme Decree 4959 to implement some of the controls recommended by the Minamata Convention.²⁹⁷ The first states that prior authorization by the Ministry of Environment and Water is needed to import and export mercury. The second created the Single Registry of Mercury (Registro Único de Mercurio – RUME), which seeks to register all importers, exporters, and traders of mercury in Bolivia.²⁹⁸

However, Campanini and Zaconeta say that the measure does not attack the fundamental problem: the unrestricted flows of mercury used for mining within the country. Although the decree requires increased documentation from mercury traders, it does not limit the amount of mercury being imported and used for mining, as has been done in other Amazonian countries such as Colombia, Peru, and Brazil.²⁹⁹

"The measure does not aim to reduce mercury for gold mining. It doesn't even seek to decrease mercury imports," Campanini said. "It does not raise anything about caps, goals, mercury import quotas."³⁰⁰

Bolivia's mercury imports began to spike in 2015, when the country took in some 150 tonnes, a massive jump from the 12 tonnes it imported the previous year. All of the mercury arrived from Mexico.

For the next three years, Mexico remained the main exporter of mercury to Bolivia, supplying nearly 600 tonnes.³⁰¹ Mexico's role was a result of two actions. The first was the favorable trade agreement between the countries, which reduced import tax on mercury from Mexico to Bolivia from 5% to 3.66%.³⁰² The second was Peru and Brazil's ban on mercury imports, which led to an increased demand for the toxic metal in Bolivia. Consequently, Peruvian and Brazilian markets started receiving Mexican mercury that was smuggled in through neighboring Bolivia.³⁰³

However, in 2019, Mexico supplied only a quarter of the 216 tonnes of mercury Bolivia received.³⁰⁴ This shift was likely due Mexico ratifying the Minamata Convention, and the increased pressure on Mexico to control mercury exports after reports of its widespread use in illegal mining in the Amazon.³⁰⁵

Other countries including India, Vietnam, Turkey, and Russia began to fill the void, sending large volumes of mercury to Bolivia.³⁰⁶ Exports from Russia have increased markedly over the past three years.³⁰⁷ In 2021, the country exported 65 tonnes, turning Russia,

which never ratified the Minamata Convention, into Bolivia's top supplier.³⁰⁸

The amount of imported mercury being used by Bolivia's gold miners is hard to determine. Miners try to recover used mercury from sediment to reduce their costs. But they also expend much more mercury than needed to separate gold, since they do not employ best practices to avoid leakage.³⁰⁹

Zaconeta investigations found that for every ton of gold extracted, at least 3 tonnes of mercury are used.³¹⁰

Bolivia's Top Mercury Suppliers, 2009-2022 (Tonnes)

Origin	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020(p)*	2021(p)*	2022(p)*
Mexico	0	1.64	8.32	6.49	9.28	12.70	151.497	221.12	171.85	207.023	17.816	63.422	29.82	
Turkey										3.350	24.47	9.31		
Spain			386					15.75	11.52	2				
China				9.34							2.37			
Germany											3.73			
UAE											5.61	2.99		
India								1.44	6.74		76.02	960	3.16	
Israel											3.29			
Japan									7.72					
UK											6.74		4.13	
Russia											30.76	53.53	65.51	7.30
Vietnam											22.05	14.15	2.77	
Gutemala												1.35	760	
Tajikistan												19.32		
Hong Kong												0.12	0	
USA										5	8			7
Total	4	1.71	8.71	15.84	9.27	12.70	151.49	238.33	197.83	210.38	192.88	165.15	106.15	7.30

LARGEST SUPPLIERS OF MERCURY TO BOLIVIA
(Total volume in tonnes from 2015 to 2022)



(p):Preliminary
UAE: United Arab Emirates | UK: United Kingdom
USA: United States of America
*The slight decrease in mercury imports in 2020 was due to the COVID-19 pandemic

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Source: National Statistics Institute (INE)

A joint report backed by Bolivia's government and Switzerland's Better Gold Initiative estimated that 141 tonnes of mercury were used in local gold production in 2019.³¹¹ That accounted for about 73% of some 193 tonnes of mercury imported that year.³¹² Investigators acknowledged that the disparities nonetheless indicate something amiss. "Considering this amount, Bolivia should have more gold," Zaconeta said.³¹³ At least 27% of Bolivia's mercury imports are diverted to illegal mining.³¹⁴

Mercury Smuggling Throughout the Amazon Basin

Bolivia's neighboring countries have tried to control the use of mercury. Peru banned its import in 2015.³¹⁵ While Brazil does not have a ban, the country has adopted Minamata's rules for its control and inspection, resulting in reduced imports.³¹⁶ In 2021, Brazil did not import any mercury at all.³¹⁷

Still, illegal mining is rampant in the farthest corners of the Amazon regions of all these countries, and prospectors never seem to run short of the toxic metal. The reason: the brisk smuggling trade in mercury.

Desaguadero is a busy border town that straddles both Peru and Bolivia. It sits on the southern shore of Lake Titicaca, and the Desaguadero River runs through it.³¹⁸ Riverboats transport a variety of contraband items – including avocados, cocaine, and mercury – across a sparsely patrolled border.³¹⁹

A significant portion of mercury smuggling employs "ant trafficking" techniques, wherein numerous couriers carry small quantities of the substance instead of consolidating it into one large shipment. The "ant trafficking" approach is preferred for mercury smuggling in border regions because it reduces the risk of massive losses that occur when shipments are intercepted. According to authorities who spoke with reporters from *Ojo Público*, a Peruvian investigative news outlet, small bottles of mercury are often hidden in backpacks and cargo.³²⁰

However, some large-scale seizures have also been made in Peru's southeastern Puno region, on the border with Bolivia. In 2019, Peruvian customs officials confiscated a shipment of around 110 liters of mercury found in an abandoned truck that had arrived from Bolivia. Authorities valued the cargo at US\$ 82,000.³²¹

Smuggling occurs on the opposite side of the country, across the Mamore River, which separates Bolivia and Brazil. In Bolivia's Amazon border town of Guayaramerin, deals are made for large amounts of mercury. A single vendor can sell more than 100 kilos per month, according to an investigation by InfoAmazonia.³²² Small bottles are also available for purchase at stores. This smuggled mercury is trafficked to the Brazilian city of Porto Velho, in the state of Rondônia, from where it can be transported to mining sites by river or highway.³²³

"Bolivia's borders are very dispersed, so it's a matter of getting to a border point, and you make the exchange of mercury for payment," Zaconeta said.³²⁴

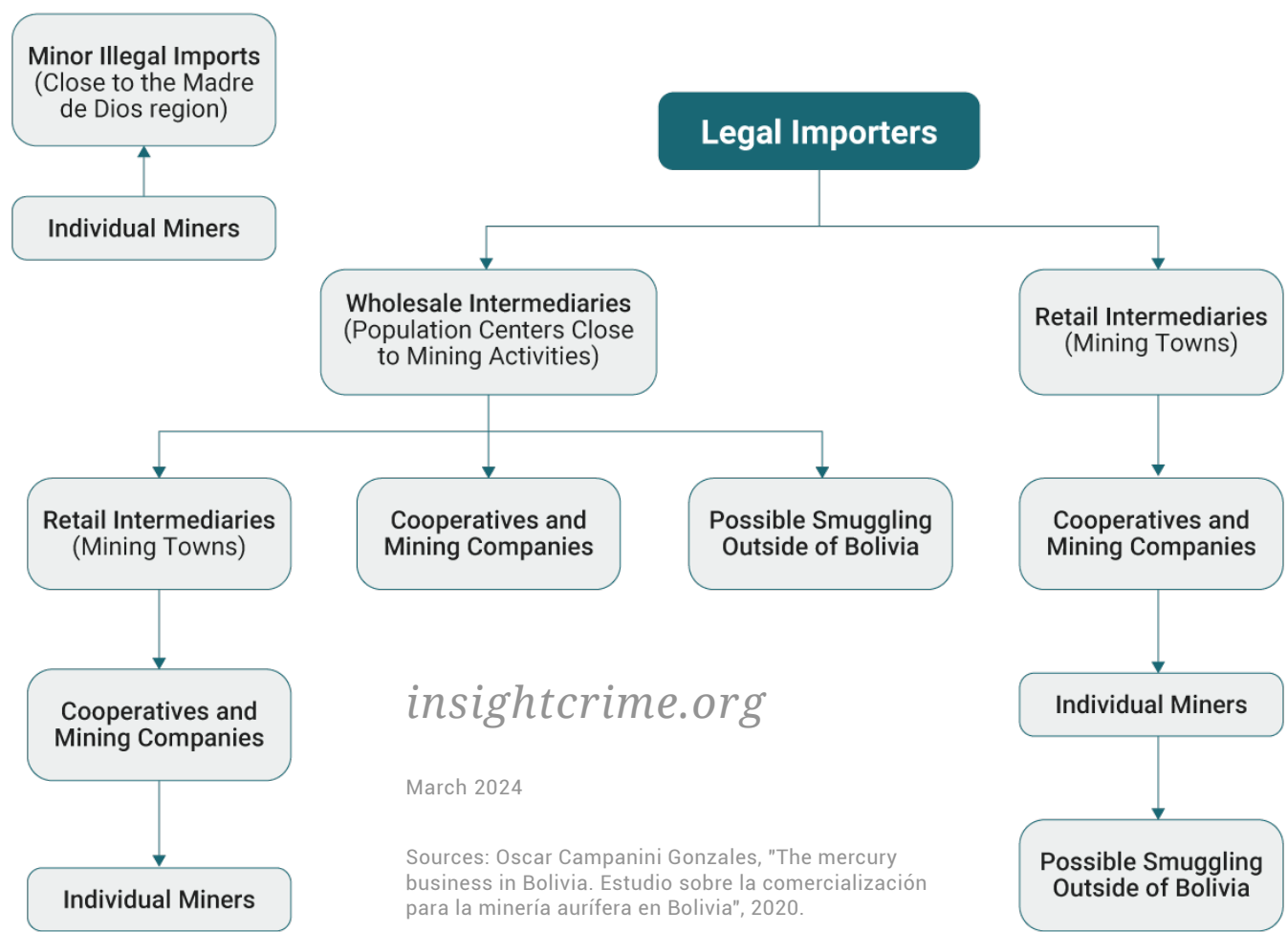
The supply chain for mercury in Bolivia begins with wholesale importers registered in the capital city of La Paz and neighboring El Alto.³²⁵

Between 2014 and 2018, 37 companies officially imported mercury into the country.³²⁶ Since 2018, Bolivian customs authorities have restricted information about mercury importers.³²⁷ During that period, tellingly, the largest importers were Peruvian nationals with ties to their country's mining sector, including the companies Mercurio y Químicos S.R.L (Merquim), Alvior Bolivia S.R.L,

and Sociedad Química Potosí. Peruvian citizens Juan Orihuela Mamani and Elisa Huamán Chávez were also listed as importers, according to an investigation by *Ojo Público*.³²⁸ Campanini said some of the Peruvian importers partnered with people previously implicated in smuggling chemicals used to make cocaine.³²⁹

Bolivia's Mercury Supply Chain

Mercury imported into Bolivia spreads to mining operations in the farthest corners of the Amazon. The supply chain begins with wholesale importers registered in the cities of La Paz and El Alto. From there, the mercury is sold to cooperatives, retail intermediaries, and individual miners. Some mercury is also smuggled across Bolivia's borders.



After its import, the mercury is bought by wholesale companies that sell to retailers and cooperatives in mining regions.³³⁰ Transportation to mining or border areas, where most retailers are located, is by land, often using transport companies, freight fleets, and private vehicles.³³¹ "Mercury reaches the most remote places," Zaconeta said.³³²

Mercury's Use in Gold Mining in Bolivia

Bolivia is the world's leading importer of mercury, having brought in 192 tons of the metal in 2019 alone, according to data from Bolivia's National Institute of Statistics. Most of this volume is used to mine gold within Bolivia, while a minority is smuggled to neighboring countries like Peru and Brazil, where its use in mining is prohibited.

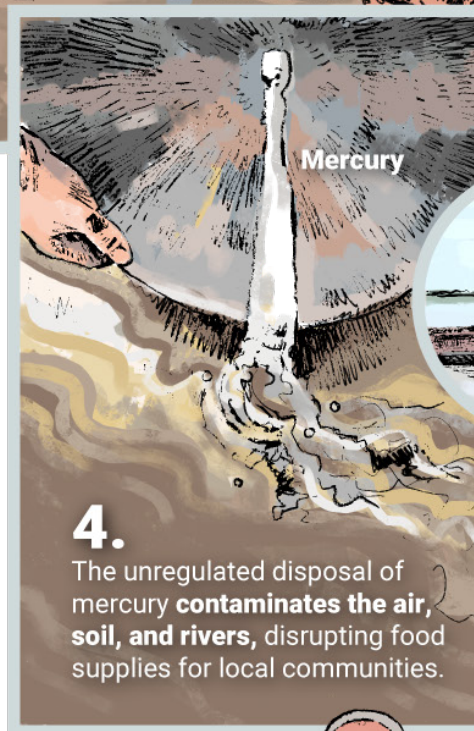


1. Liquid mercury is added to the mixture of gold and sand extracted from the riverbed

2. In the mill, or the pan, the mercury traps and binds the gold into an amalgam.



3. For the purest gold, the mercury has to be removed from the amalgam, **either by squeezing the amalgam into a cloth or burning it.**



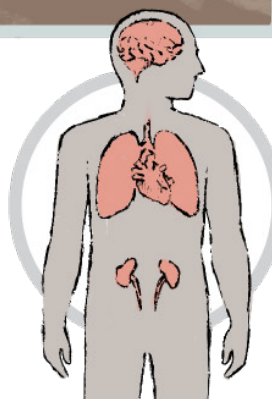
4. The unregulated disposal of mercury **contaminates the air, soil, and rivers**, disrupting food supplies for local communities.



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Source: InSight Crime field research, CEDIB, Bolivian Ministry of Mining and Metallurgy, CEDLA, EPA.



5. Mercury can spread several meters from its original source. Prolonged exposure can cause **damage to the brain, heart, kidneys, lungs, and immune system.**

Marcos Orellana, the UN Special Rapporteur on toxics and human rights, has called out Bolivia for not adhering to the Minamata Convention. He has also repeatedly warned of how the indiscriminate importation and use of mercury in mining there is dangerous not only for Bolivia but the region as a whole.³³³

When miners use mercury to separate gold from sediment, leftover mercury washes into rivers and leaches into the forest floor. Trees also absorb mercury vapor when the resulting amalgam is burned off to leave behind gold. According to CEDIB, gold mining causes 82% of mercury emissions in Bolivia.³³⁴

Mercury is a dangerous neurotoxin to humans. It can impair children's development, damaging the brain and central nervous system. Prolonged exposure to mercury in adults can cause damage to the brain, heart, kidneys, lungs, and immune system, according to the US Environmental Protection Agency (EPA).³³⁵

Various scientific studies have found that Indigenous peoples across the Amazon who live near mining sites have been exposed to elevated concentrations of mercury. This includes Bolivia. According to a report by the UN's Orellana in September 2021, alarming levels of mercury were found in Ese Ejja Indigenous women living on the banks of the Beni River.³³⁶ Hair samples from the women tested – all between the ages of 14 and 44 – detected mercury levels of between 4.75 and 7.58 parts per million (ppm).³³⁷ The threshold considered safe by the World Health Organization is 1.6 ppm.

Mercury left in waste rock and tailings from mining are poisoning Bolivia's rivers. According to Orellana's report, the elevated levels of mercury seen in the pregnant women of Ese Ejja were due to their eating contaminated fish.³³⁸

"They live from fishing. It is their common food source," journalist Iván Paredes said. "Mercury is already damaging lives."³³⁹

POACHERS' SAFE HAVEN: BOLIVIAN AMAZON PLUNDERED FOR WILDLIFE

Bolivia's rich biodiversity makes it a prime target for traffickers.³⁴⁰ It stands as one of the world's most biodiverse countries, hosting nearly half of South America's bird species, around 350 mammal species, and 260 species of reptiles.

Furthermore, Bolivia's extensive, porous borders offer ample opportunities for the smuggling of wildlife, ranging from large to small creatures, including those poached from neighboring countries.

Jaguars that roam across Bolivia's forests are poached by the dozen every year. Their claws and fangs are harvested to feed an illicit market for big cat products in Asia, where such items fetch soaring prices.

Between 2014 and 2021, Bolivian authorities seized at least 760 teeth from jaguars, most of them destined to China.³⁴¹

Meanwhile, birds captured in the wild end up in local markets for the pet trade, while others, including coveted macaws, are smuggled to neighboring countries. The eggs of Amazon River turtles are harvested by the hundreds for local consumption, posing a threat to these vulnerable species.

Demand in Japan for live large beetles, to be kept as pets or used in staged wrestling matches, are fueling the collection of rhinoceros beetles in wet forests.

"The fact that our country is in the heart of South America has made it much easier for traffickers to extract and bring animals and their parts to the border," said Eduardo Franco Berton, an environmental journalist based in Santa Cruz.

A Criminal Trafficking Chain in Jaguar Teeth

Eco-traffickers have taken advantage of Bolivia's wide range of ecosystems, from its Amazon jungle, cloud forests, and savannahs to its dry forests and Andean mountains. They target many species, responding to the demands of a globalized market for exotic flora and fauna.

For Mariana Da Silva, head of research on international wildlife trafficking at the non-profit Wildlife Conservation Society (WCS), the jaguar trade went unnoticed in Bolivia for a long time.³⁴²

Traders arrived since 2014 in towns such as San Borja, Rurrenabaque, and Riberalta, all in the northeastern department of Beni, seeking jaguars and their parts.³⁴³

One of the most infamous cases occurred in 2017, when local radio stations broadcast advertisements for jaguar fangs, preferably "long and clean" ones.³⁴⁴ WCS investigators had heard the call for the teeth while conducting camera trap monitoring.³⁴⁵

"Obviously that was not common. It was the first time something like this had happened and it was alarming," said Da Silva.³⁴⁶

Jaguar killings largely occur in response to their feeding on livestock. With shotguns, ranchers hunt the felines on riverbanks and in forests near cattle farms.³⁴⁷

Jaguar Poaching in Bolivia

Jaguars in Bolivia are being poached for their parts, which are prized in East Asian countries. Their fangs and claws, emblems of status and power, are used in jewelry. Bones and other parts are also used in traditional medicine.

Conservation Status

Nearly Threatened



The jaguar is the largest feline in the Americas and the third largest in the world, after the tiger and the lion.



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Source: Mongabay and InSight Crime Field Research

Local hunters who chance upon a jaguar while stalking other animals, such as bush pigs, also kill the cats. In some cases, hunters are commissioned to poach jaguars by traders who know the high price that their parts fetch.

Of 1,100 people living in rural areas of northwestern Bolivia, 17% said they had been approached about killing a jaguar, according to a 2021 study conducted by investigators with the Convention on International Trade in Endangered Species (CITES).³⁴⁸ Of those interviewed, many said they had killed jaguars and traded in their parts on behalf of others.

Beliefs about big cats in East Asian countries, especially China, have long fueled an illicit market for parts. Teeth and claws are emblems of status and power. Bones and other tiger parts, including genitals, are used in traditional medicine.

According to a story published by the journalist Roberto Navia in the media outlet *El Deber*, in China, a jaguar fang can sell for as high as US\$ 2,500.³⁴⁹ A single animal's fangs, claws, and genitals can earn a profit of US\$ 20,000.

The jaguar is listed as Appendix I by CITES, meaning trade in the species is prohibited. The IUCN NL Red List classifies the species as "near vulnerable," with populations decreasing. Nevertheless, Bolivia sees about 61 jaguars poached per year, the most of any Latin American country, according to the 2021 CITES report.

Mariana Da Silva, of WCS, said China figures heavily in Bolivia's jaguar trade.

"Of all the seizures made from 2010 onwards, over 50% of all these jaguar seizures are connected to China in some way. Either they were packages intercepted on their way to China, or instances involving Chinese citizens at some point in the seizure process," she said.

Traffickers, many of them Chinese nationals, contact hunters experienced in shooting and killing the felines. The carcasses are harvested for their fangs and claws.

Bolivian intermediaries have been cut out of this trafficking chain to lower the risk of detection, Berton said.

“When we traveled and were able to continue interviewing people, we realized that there was already a change in the modality ... There were no longer [intermediaries], there were already Chinese citizens contacting the hunters directly,” he said.³⁵⁰

Until recently, the smuggling of jaguar parts in Bolivia has occurred mostly through the mail. Between 2014 and 2016, 337 jaguar fangs were seized across 16 shipments sent through Bolivia’s postal service, ECOBOL, to China.³⁵¹

Passengers on commercial flights have also been caught smuggling significant quantities of jaguar teeth. In 2015, a Chinese businessman residing in Bolivia was arrested at the Beijing airport in possession of 109 fangs.³⁵²

Earth League International (ELI), a non-governmental organization investigating wildlife crime, has tracked jaguar smuggling networks in Bolivia. In a 2020 report, conducted with the IUCN and the Bolivian government, investigators identified some 25 people in Bolivia, and another 50 “persons of interest” outside the country, connected to the trade. The report described three criminal networks involved in the jaguar trade as “fully functioning.”

Traffickers carry out legitimate business parallel to their involvement in the jaguar trade. They use restaurants or stores as collection centers and to launder profits. For example, in March 2022, authorities seized 16 claws in a raid on a chicken restaurant in Santa Cruz.

Vendors of artisanal objects in local markets have been discovered offering claws and teeth for sale. Berton encountered a vendor in the Trinidad market, located in Beni, who offered to sell him a fang for US\$ 100.

These vendors also accept custom orders. Sellers display their products on their phones and through accounts on WeChat, a Chinese messaging social networking platform, where payment and shipping arrangements can be negotiated.³⁵³ Top traders maintain direct connections with wholesalers based in China.³⁵⁴

To smuggle items out the country, traffickers bribe police and customs officials. Passengers on commercial flights transport parts concealed in their luggage or on their person. Due to the heightened scrutiny, direct routes to China are no longer used. Instead, traffickers use transit points in Brazil, Vietnam, and Hong Kong.³⁵⁵ While international shipping and the postal services are still used, the seizures of jaguar parts sent by mail has significantly declined after 2019, indicating a probable shift in smuggling tactics.

Some conservationists have pointed to the rapid rise in the smuggling of jaguar parts from Bolivia to China as a sign that they are being used as a substitute for increasingly scarce tigers.

Interestingly, jaguar teeth are the most commonly seized parts headed to China, indicating that the feline’s canines are filling demand from collectors.

However, parts used in traditional Chinese medicine have not been as widely seized. For example, the smuggling of a highly prized paste made from boiling the carcass of a big cat, typically a tiger, has not been seen in Bolivia, however smuggling of jaguar pastes has occurred in Suriname, another hotspot for jaguar poaching in Latin America.

One common factor has emerged in Latin American countries seeing large numbers of jaguars harvested: Chinese investment.

According to a study published in 2020 in *Conservation Biology*, researchers found that countries in Central and South America with relatively high corruption, Chinese investment, and low income per capita had 10 to 50 times more jaguar-related seizures.³⁵⁶

On the Hunt for Birds, Turtles, and Beetles

Locals also target birds, with the poaching being largely opportunistic, according to Berton. Parrots, parakeets, and cockatoos are the primary species captured, prized for their vibrant yellow, orange, and green plumage. TRaffickers specifically target species like the yellow-headed Amazon parrot and the saffron finch due to their popularity.

Generally, the birds are captured while they are young and still in their nests. Many of them end up in local markets. In some cases, Indigenous people have been observed selling the birds directly. Indigenous communities are often enticed into capturing birds for traders.

Amazon river turtles are frequently targeted by poachers for their eggs and meat. Two species are particularly at risk: the arrau, or giant Amazon turtle (*podocnemis expansa*),

and the yellow-spotted river turtle, known locally as *pets del rio*. The yellow-spotted river turtle is listed as “vulnerable” on the IUCN Red List of Threatened Species. While the arrau turtle is currently classified as lower risk, turtle specialists within the organization have advocated for its reclassification as “critically endangered.”³⁵⁷

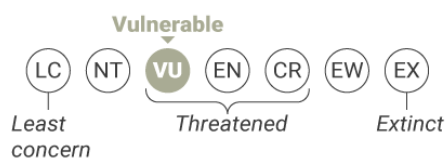
Both turtle species are commonly consumed by communities living along the riverbanks of departments such as Beni, Cochabamba, La Paz, Pando, and Santa Cruz.³⁵⁸ Certain Indigenous groups, such as the Tsimané Indigenous community, are allowed for cultural reasons to collect turtle eggs for their consumption.

But large amounts of the eggs often wind up for sale in local markets. For example, a series of raids over four weeks in mid-2017 led to the seizure of some 50,000 eggs. Bolivian river turtles and their eggs have also been smuggled en masse into Brazil.

Peta Turtle Trafficking in Bolivia's Beni

In protected areas of Beni, Peta turtles are poached for their meat, eggs, and shells, which are used to manufacture handicrafts. The Peta turtle trade occurs mainly in local markets.

Conservation Status



Distribution
(home region)

Bolivia

LATIN
AMERICA



It could spawn up to twice yearly, although the laying period is 7 to 10 days.

insightcrime.org

March 2024

Source: Mongabay and InSight Crime Field Research

While most birds and turtle products are sold locally, cross-border trafficking also occurs. Berton said that parrots and cockatoo species from Bolivia are smuggled to Brazil, Ecuador, Chile, and Peru.

As authorities have become more adept at identifying the trafficking of large parrots, or macaws, because of their size and distinctive coloring, smaller birds have also come under threat. For example, authorities seized

approximately 500 saffron finches, known locally as *botones de oro*, at Peru's Cabanillas de Puno customs station, near the border with Bolivia. The birds were discovered in boxes on a bus.

"We have seen ... migrants from the western part of the country transporting large quantities of birds in trucks and fleets. We are talking about numbers ranging from 100, 200, to 500 parrots and parakeets," Berton said.³⁵⁹

Birds Poached to Feed the Illegal Pet Trade

Canaries, parrots, and cockatoos are coveted for their green, yellow, and orange feathers. Traffickers go to their nests to catch them as chicks. In addition to local markets, they are trafficked to other countries, such as Peru, Brazil, and Chile.

Conservation Status

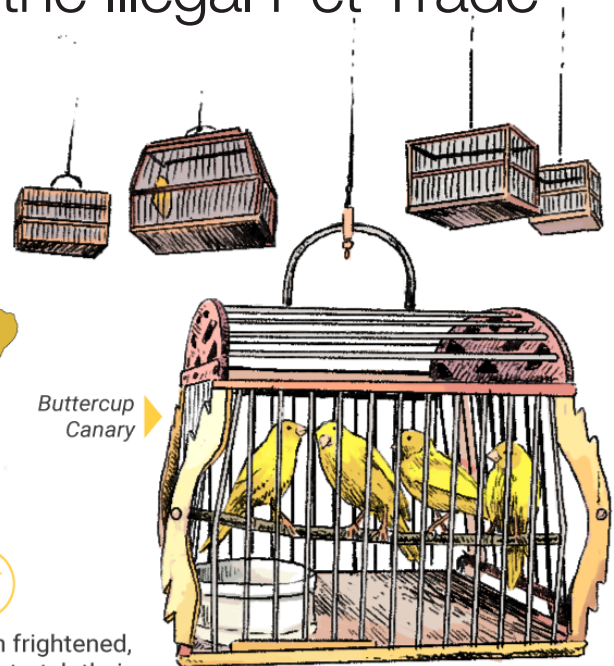
Least concern



Buttercup Canary



When frightened, they stretch their bodies and make scared noises.



March 2024

insightcrime.org

Source: Mongabay and InSight Crime Field Research

Locals in the mountainous North Yungas region have become adept in identifying and gathering two species of rhinoceros beetles, *dynastes hercules* and *dynastes satanas*. While displaying a replica of a Hercules beetle, which is black and blue with large horns the length of his hand, Berton explains that these beetles are smuggled to Japan.

"We discovered that breeding these beetles is not illegal. There are centers and pet stores where they are bred. However, this has opened a window to an illegal market," Berton said.

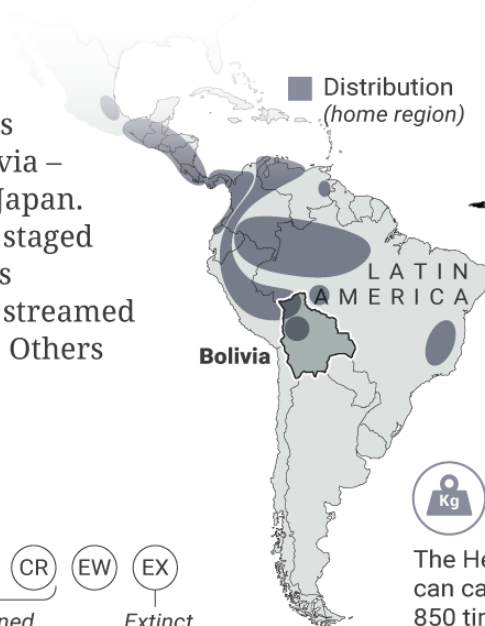
Hunters, who collect the beetles at night, can earn between US\$ 10 to US\$ 20 per beetle from smugglers. In Japan, the price for a healthy large specimen is as high as US\$ 500.

Bolivian Beetles Wrestle in Japan

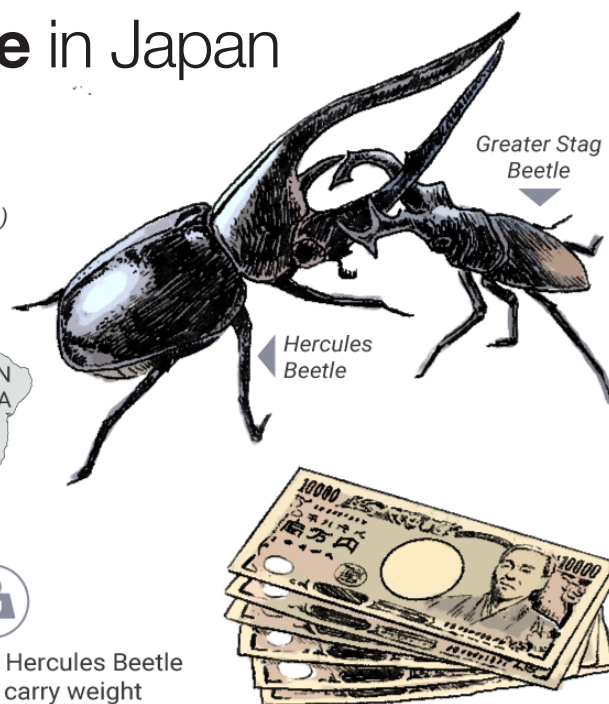
Big-horned rhinoceros beetles – taken from Bolivia – are ending up in Japan. Some are used in staged wrestling matches streamed live for streamers. Others are kept as pets.

Conservation Status

Not assessed



The Hercules Beetle can carry weight 850 times that of its own body.



March 2024

insightcrime.org

Source: Mongabay and InSight Crime Field Research

Bolivia's Environmental Ministry classifies the satanas beetle as endangered, while CITES lists it under Appendix II, meaning trade is restricted. According to beetle hunters who spoke with Berton, the live beetles are carried by bus in cardboard boxes to a collector in Peru who is responsible for flying them to Japan.

Hunters have also learned to collect beetle larvae, which are less likely to be detected by airport customs officials.

Wildlife Trafficking: A Low Priority

The outfit in charge of investigating environmental crime in Bolivia, the Forestry and Environmental Protection Police (La Policía Forestal y de Protección al Medio Ambiente - POFOMA), is bare bones. Its main offices, in downtown La Paz, are in an old house whose courtyard is employed as an animal rescue center. During an interview, a police official who asked not to be identified because he was not authorized to speak said a lack of resources makes it difficult for them to do their jobs.

They still work with physical records, according to Da Silva, who has helped create a digital database tracking eight years of seizures.³⁶⁰ "A large part of the efforts we make are to help the authorities systematize their information," she said.

According to Da Silva, the presence of POFOMA in departments such as Beni is highly limited. They operate with a scant number of officers and lack the vehicles necessary for mobilization. On occasion, WCS provides fuel to support joint operations with POFOMA.

Furthermore, a restructuring of the Prosecutor's Office in 2020 has relegated wildlife crime to a lower priority within Bolivia's legal system. Environmental crimes were placed under the authority of the department that investigates drug trafficking and money laundering. For Da Silva, this has resulted in wildlife crimes being perceived as less critical.

"Drug trafficking is considered a serious crime, while wildlife trafficking is seen as a minor crime," she said.

STATE RESILIENCE

Bolivia finds itself torn between two opposing forces. On one hand, the state has established regulatory frameworks to protect the country's biodiversity. On the other hand, it is driven to meet the growing international demand for gold, soybeans, and beef.³⁶¹

To date, the economic development agenda has overshadowed environmental protection efforts, with agriculture and mining sectors bulldozing their way through conservation areas. This approach has led to the decimation of the very forests, natural parks, and Indigenous communities in the Amazon that the government's Mother Earth Law of 2012 claims to protect.³⁶²

These contradictory policies lie at the heart of Bolivia's longtime ruling party, the Movimiento al Socialismo (MAS), led from 2006 to 2019 by the coca growers' union leader, Evo Morales, and since 2020 – after the brief interim government of Jeanine Áñez – by President Luis Arce, Morales' Minister of Economy.

For years, the Bolivian government and its Amazon neighbors have promoted agricultural and mining activities as the pillars of economic development and poverty reduction.

The strategy has worked. During Morales' tenure, Bolivia's GDP grew by more than 50% and poverty fell from 60% in 2006 to 35% in 2017.³⁶³ Following the COVID-19 pandemic, Luis Arce put agriculture and mining at the center of his economic recovery plan. Between 2020 and 2021, extreme poverty fell from 13.7% to 11.1%.³⁶⁴

At the same time, deforestation reached record levels.³⁶⁵ According to several mining experts, Bolivia has gone even one step further than other countries in the Amazon, such as Colombia and Peru, when pursuing economic growth. The Bolivian government has consistently privileged the mining and agriculture industries by establishing a regulatory framework so lax that it blurs the line between the legal and the illegal.³⁶⁶

"There are few countries in which there has been so much interest from the state itself to leave so many ambiguities where you don't know what is legal and what is not," said a Bolivian environmental crime expert, who asked to remain anonymous for security reasons.³⁶⁷

Yet for the MAS, this is not just about economic growth. Strengthening mining and agribusiness and promoting the invasion of settlers in the lowlands, has been a central part of its nearly two-decade effort to remain in power.

Legislative Framework and Political Will

In Bolivia, several laws are in place to target environmental crime. However, legal loopholes and contradictions mean that deforestation continues to flourish.³⁶⁸

The backbone of Bolivia's environmental regulations is Law 300: the Framework Law of Mother Earth and Integral Development for Living Well (Ley Marco de la Madre Tierra y Desarrollo Integral Para Vivir Bien).³⁶⁹ Created in 2012 and instantly considered a global benchmark,³⁷⁰ it established the government's commitment to conservation and promoted the idea of living in harmony with Mother Earth.³⁷¹

The following year, however, Bolivia created Law 300's legal rival: the "Patriotic Agenda 2025." The bill enshrined 13 pillars into government policy that sought to create by 2025 a "dignified and sovereign Bolivia, to raise a society and state that is more inclusive, participatory, democratic, and without discrimination, racism, hatred, or division."³⁷²

While certain pillars focus on the protection of forests and rivers, the ones that predominate promote economic development, frequently at the expense of environmental conservation.³⁷³

“What is Bolivia proposing in these pillars? First, to be an exporter of minerals. Second, to be an exporter of hydrocarbons. Third, to be an exporter of electric energy through hydroelectric plants. And fourth, to be an exporter of grains, food, and meat,” said Alcides Vadillo, director of the Earth Foundation. “These four pillars, which are essentially extractivist, have lowered the priorities of all environmental regulation.”³⁷⁴

For example, an increasing number of permits have been issued to clear forested areas to establish agricultural activities in the lowlands of the Santa Cruz department, which borders Brazil and Paraguay.

Centered in the Chiquitania region, these grants go to highland settlers from MAS-voting departments like Cochabamba and Potosí. Besides guaranteeing their continued support, this allows the government to increase support in areas that have historically been anti-MAS.³⁷⁵

“There is a political control issue,” said Vadillo. “It’s a mechanism of moving populations to have territorial control and change the electoral map in the area.”³⁷⁶

Nor is it the only mechanism favoring deforestation. Until 2014, landowners were allowed to clear up to 3 hectares without prior authorization or management plan. Since 2015, Law 741 has increased the discretionary amount to 20 hectares,³⁷⁷ due to heavy lobbying by agribusiness interests.

The legislation also facilitated fires to clear land for livestock farming. In July 2019, Decree 3973 allowed “controlled fires” in Santa Cruz and Beni departments, to create space for cattle to increase beef production.³⁷⁸ As noted earlier in this report, that year fires got out of control for months and incinerated swathes of Bolivia’s Amazon and the Chiquitania Forest. Although the government of Jeanine Áñez repealed the decree the following year,³⁷⁹ fires continue to be set illegally to clear huge areas of tree cover and open up pastures.

For the environmental crime expert, Decree 3973 is an example of how Bolivia has permitted activities that would be illegal in any other country.³⁸⁰

“There is usually someone behind who promotes specific measures so that activities that were illegal before no longer are,” he said.³⁸¹

The same has happened with gold mining. In 2006, Madidi National Park had strong management plans, only permitting mining in a few areas. However, in 2014, the MAS government passed Law 535, which designated the entire national territory open to mining activities, including protected areas like Madidi.³⁸²

As discussed in the mining chapter, the result was that the natural resource exploitation zone in Madidi – where mining can legally be carried out – instantly increased by around 65%.³⁸³ This created, and continues to create, significant ecological pressure from gold-hungry cooperatives.³⁸⁴

In October 2022, the government and the mining cooperatives agreed to review the management plans for Madidi, Apolobamba — a protected area south of Madidi, and Cotapata National Park, near the country’s capital. The intention was to expand gold mining there in the coming years.³⁸⁵ Indigenous organizations opposed the review and after a series of protests managed to have it annulled. However, these communities assure miners have been entering these territories since 2021.³⁸⁶

The reality is that the government does not have the will to stop the expansion of gold mining in protected areas, nor the irregularities committed by mining cooperatives.³⁸⁷ For example, cooperatives must have an environmental license to operate, according to the Mining Law 535.³⁸⁸ However, only around 200 of the 1,300 cooperatives have an environmental license. This means their operations are possibly illegal, but enforcement is nonexistent.³⁸⁹

Former high-level mining official Héctor Córdova told media outlet *Mongabay* the government will hardly be able to control the cooperative mining sector.³⁹⁰

“It has gotten out of hand and now the government is in real trouble because it has allowed this cooperative subsector to grow too much without control,” he said.³⁹¹

On the other hand, certain measures indicate that the nation is beginning to address illegal mining with greater urgency. Since 2022, the government has been developing a supreme decree to establish a council to combat illegal mining. This council is set to include the Public Prosecutor’s Office, the police, the armed forces, and the Attorney General’s Office.³⁹²

Some prosecutors have also begun to receive training from Dominican prosecutors who specialize in investigating environmental crimes.³⁹³

Deregulation also affects mercury, the toxic metal used to separate the tiny gold particles from the sediment. In 2016, Bolivia ratified the Minamata Convention, which seeks to eliminate the global use of mercury and prevent its spread in the environment.³⁹⁴ Despite that, it has since emerged as South America’s most notorious mercury importer, ignoring all the convention’s recommendations.³⁹⁵

For example, following the ratification of the Minamata Convention, Bolivia was obligated to establish a National Action Plan detailing the measures for reducing mercury use in small-scale mining.³⁹⁶ This plan was initially due by mid-2022.³⁹⁷ However, as of January 2023, it is now anticipated to be submitted in 2025.³⁹⁸

In January 2023, the government at least announced the creation of two programs funded by the Global Environment Facility (GEF) and implemented by the United Nations Industrial Development Organization (UNIDO). These are called the “National Mercury Action Plan for Bolivia” and the “PlanetGOLD Bolivia.”³⁹⁹

Both seek to progressively reduce mercury use in mining and improve the adoption of mercury-free technologies, particularly by mining cooperatives.⁴⁰⁰ However, although they represent a step forward regulating mercury, their implementation faces many challenges, according to CEDLA’s Zaconeta.⁴⁰¹

First, reducing the use of mercury requires finding out how much is currently used, and to date, “the government has not shown the political will to check this,” said Zaconeta. And second, it requires the cooperation of the country’s biggest mercury users: the mining cooperatives.⁴⁰²

In June 2023, the government launched Supreme Decree 4959 that requires traders to obtain authorization prior to importing and exporting mercury, and tall importers, exporters, and traders of mercury in Bolivia to register their activities.⁴⁰³ Campanini said the initiative responds to pressure exerted by civil society and international organizations regarding Bolivia’s role as a center for the sale of mercury used in illegal mining in the Amazon and the need for the country to comply with the provisions of the Minamata Convention.⁴⁰⁴

While the decree will increase documentation of the mercury trade and imports in Bolivia, it does not reduce or prohibit mercury imports for the mining sector in the country.⁴⁰⁵ Thus, this initiative will not disrupt the use and distribution of the toxic metal in illegal mining areas across the Amazon Basin.⁴⁰⁶ However, as of March 2024, the decree has not yet entered into force.

Corruption Further Obstructs Political Will

Corruption within Bolivian institutions has for years paved the way for environmental crimes and truncated the government's will to confront them. Bolivia's lax and frequently contradictory regulatory system gives decision-makers a high degree of discretion that opens opportunities for corruption and abuses of power.⁴⁰⁷

Also, as in other countries of the Amazon, it is common to see embezzlement and payment of bribes to allow the operation of environmental crimes. The most infamous agency has been Bolivia's National Institute of Agrarian Reform (Instituto Nacional de Reforma Agraria - INRA), which oversees land titling and distribution and whose members have been accused of rampant land-grabbing.

In 2016, local media reported that the INRA had identified at least 45 agents involved in awarding false titles,⁴⁰⁸ who had allegedly used fake documentation to sell land in Santa Cruz and Beni departments.⁴⁰⁹ In 2019, the INRA's departing director, Juan Carlos León, stated that during his 5-month tenure, he had fired around 100 officials and begun an even greater number of criminal proceedings.⁴¹⁰

Even so, the problem does not appear to have improved. In October 2022, Cochabamba's Departmental Federation of Neighborhood Councils (Federación Departamental de Juntas Vecinales Cochabamba - Fedjuve) reported another 55 INRA officials for alleged involvement in land trafficking, calling on the departmental prosecutor's office to arrest them. The departmental director of INRA, Armando Mita, denied the accusations.⁴¹¹

Besides the INRA, there have been several corruption cases within Bolivia's mining regulator, the AJAM. In 2021, AJAM director Brenda Lafuente Fernández presented at least two internal complaints about corruption during her predecessor's administration. These related to the irregular granting of mining blocks in forested areas and to relatives of former AJAM officials.⁴¹²

Civil Society

Civil society in Bolivia has played a crucial role in addressing environmental crime and deforestation. Organizations such as CEDLA, CEDIB, and Earth Foundation, among others, are on the front lines, investigating deforestation, uncontrolled fires, land grabbing, illegal mining, and wildlife trafficking across Bolivia.

FAN, the conservation NGO, has taken a more hands-on approach, helping combat the illegal fires created to burn down huge areas of forest cover and open up pastures in Santa Cruz's Chiquitania forest.⁴¹³ With funding from the European Union, the FAN travels to affected areas to train and equip volunteer firefighters.⁴¹⁴

It is joined in this by the Alas Chiquitanas foundation, started in 2019 to tackle the fires that had devastated Chiquitania that year. Volunteer-based, the foundation buys supplies for civilian firefighters and food for the victims of fires.⁴¹⁵

The proverbial eyes-in-the-sky is the Bolivia Sustainable Forest Management Project (BOLFOR), which tracks the fires' spread. Funded by the Bolivian government and the US Agency for International Development (USAID), BOLFOR has mapped much of the Bolivian Amazon's destruction. Before 1999, the annual area lost was approximately 100,000 hectares per year.⁴¹⁶ Between 2001 and 2020, the figures increased significantly, with an annual average of 3.7 million hectares burned.⁴¹⁷ In 2019, a record year, 5.9 million hectares⁴¹⁸ were incinerated by fires with flames over 30 meters high.⁴¹⁹

Indigenous communities have defended their territories as criminal organizations with an interest in mining have encroached. As noted earlier in this report, in October 2022, the government and the mining cooperatives expressed their intention to expand the gold extraction areas in protected areas of Madidi, Apolobamba, and Cotapata National Park.⁴²⁰ Indigenous communities used community organization tactics and protests to pressure the government to agree to annul the agreement.⁴²¹

Environmental leaders, indigenous communities, and park rangers like Marcos Uzquiano, have constantly denounced illegal mining operations across Madidi National Park.⁴²² However, this resistance has put some of them in great danger.⁴²³

Multilateral Cooperation

To combat environmental crime, Bolivia has signed regional agreements with other Amazon Basin countries, and certain international organizations. There remains much room for improvement though.

The most important partnership is the Amazon Cooperation Treaty Organization (ACTO), created in 2002 between Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.⁴²⁴ ACTO carried out projects in Bolivia to strengthen institutional and civil initiatives to monitor biodiversity, water, and forest resources.⁴²⁵

However, the organization's impact has been limited. ACTO lacks financial resources, has low decision-making, and has patchy implementation.⁴²⁶ More importantly though, it has had its hands tied from the start, because Bolivia and other members prioritize extractive and unsustainable economic development over environmental protection.⁴²⁷

Another regional partnership is the Leticia Pact, signed in 2019 by Bolivia, Colombia, Peru, Ecuador, Brazil, Suriname, and Guyana.⁴²⁸ The pact seeks to strengthen coordinated action among the countries of the Amazon region to combat deforestation, mostly by facilitating cooperation and information exchange.⁴²⁹ However, little has been done to follow this through.

Bolivia also works with the UNODC. Its “Global Programme for Combating Wildlife and Forest Crime” has sought to train Bolivian prosecutors in handling environmental crimes against wildlife and forests. The first training took place in May 2021, with around 60 participants.⁴³⁰ If continued, the program could greatly improve capacity.

Other international partnerships include the Network of Police Specialized in Fighting Environmental Crime in Latin America and the European Union, known as the Jaguar Network.⁴³¹ The initiative is part of the Europe Latin America Programme of Assistance against Transnational Organised Crime (EL PAcCTO), an international cooperation program funded by the European Union that seeks to support the fight against transnational organized crime.⁴³²

The network hosted a multi-country workshop in Rio de Janeiro, Brazil, in May 2018. Representatives of the public prosecutors' offices and the police from Bolivia, Brazil, Colombia, Ecuador, and Peru participated.⁴³³ The transnational collaboration hasn't yet shown other concrete results.

Bolivia also belongs to the Financial Action Task Force of Latin America (GAFILAT), the primary anti-money laundering institution in the region. With 18 member states, GAFILAT has developed annual reports to map money laundering typologies related to different illicit economies, including environmental crime.⁴³⁴ GAFILAT has identified cases of money laundering related to illegal mining and illegal logging in other countries of the Amazon, such as Brazil, Colombia, Peru, and Ecuador. In Bolivia, however, assessments have shed little light on money laundering cases related to environmental crime.⁴³⁵

As for the private sector, there have been some small steps. A handful of mining cooperatives have agreed to work with the “Swiss Responsible Gold Initiative,” a public-private partnership between the Swiss Responsible Gold Association and the SECO, a Swiss government research institute. The initiative aims to improve conditions in artisanal and small-scale gold mining.⁴³⁶

One way is by getting mining cooperatives to phase out mercury use.⁴³⁷ Most have ignored these efforts, yet a few have been persuaded to transition. For example, “Bolsa Negra,” a cooperative working in the east of La Paz department,⁴³⁸ now uses gravimetric concentrator tables that separate gold particles “by forming fan-shaped bands (eyebrows), according to their specific weight (and granulometry).”⁴³⁹

The tables allow gold and other minerals to be separated in a safe environment, instead of reaching rivers and other bodies of water, mitigating the environmental impact.⁴⁴⁰ This can even represent extra income as it is possible to recover gold lost in conventional mercury separation processes.⁴⁴¹

CONCLUSIONS AND OPPORTUNITIES FOR INTERVENTION

1. The law favors economic development over environmental protection

Bolivia has maintained a double rhetoric. On the one hand, it has promoted laws that advocate environmental conservation, while on the other, it has prioritized economic development policies at the expense of forests and biodiversity.⁴⁴²

Along the way, legal and illegal boundaries have become blurred. Activities considered illegal in other countries within the Amazon Basin remain gray areas in Bolivia, such as the permission to start fires, mining operations in protected areas, and controls over mercury imports.⁴⁴³

These decisions made by the government have kept laws ambiguous in order to gain political backing from powerful economic sectors, like mining and agribusiness. This approach allows the use of mercury in gold mining and permits settlers to clear forests to establish farms and cattle ranches.

Bolivia can learn from regional experiences how to mitigate the impact of ambiguous legal frameworks. Peru, for example, has employed regulatory measures such as establishing special importer registries for small-scale miners who still use mercury.⁴⁴⁴ Colombia, meanwhile, has implemented Decree No 723/2014 and Law No 1658, which have successfully regulated the commercialization of mercury in the country.⁴⁴⁵

2. Corruption and environmental crime operate symbiotically

Corruption, as in other countries within the Amazon Basin, facilitates environmental crime in Bolivia. A high level of discretion in decision-making processes is a prevalent form of corruption in the country, as government officials and all actors involved in environmental crime operate without minimal oversight. This is evidenced by the fact that over 80% of mining cooperatives function without the required environmental license, an illegal practice that the government has made little effort to address.

Furthermore, officials from institutions tasked with the monitoring and protection of forests and biodiversity have, at times, been complicit in their degradation. In return for cash, contracts, or even jaguar canines, legitimate entities collude with criminal networks to enable illegal mining, land grabbing, and the trafficking of timber and wildlife.⁴⁴⁶ This collusion is made easier by the numerous legal loopholes identified previously, coupled with the ineffectiveness of enforcement bodies.

3. Cooperatives dominate the mining sector through political and economic power

In Bolivia's new gold rush, mining cooperatives have become the sector's largest operators, outweighing mining companies. Their enormous economic and political power and proven ability to paralyze the country has not only gained them lucrative tax benefits, but also shielded them from investigation over the countless irregularities they commit in the gray spaces of Bolivian mining law.

Some of these cooperatives without an environmental license have even received mining concessions in protected areas, where they have established alliances with shady Chinese and Colombian miners. Besides using dangerous equipment, they systematically employ mercury to gather gold, a clear violation of the Minamata Convention that Bolivia ratified in 2016 but the government has since ignored.

Backing these rogue groups may guarantee the MAS their electoral support, but only at the cost of ecological breakdown.

4. Deforestation is spurred by global food export demand

The driving force behind deforestation in the Bolivian Amazon is the worldwide demand for beef and the soy fodder needed to produce it. Exports of both commodities are at all-time highs. In 2022, Bolivia exported 18,560 tonnes of beef, reaching a record value of US\$ 120 million.⁴⁴⁷ Likewise, soybean exports increased by 74.2%, attaining revenues of US\$ 2 billion.⁴⁴⁸

The biggest buyers are large agribusiness companies, but supermarket and food chains such as Burger King and McDonalds are also complicit in feeding the fires.⁴⁴⁹ Set by ranchers and agribusiness entrepreneurs, these perennial blazes are the main cause of deforestation in the Bolivian Amazon.⁴⁵⁰ These activities are unlikely to diminish as long as Bolivia prioritizes economic growth over sustainable environmental practices.

Opportunities for Intervention

Build bold new reward models to stop environmental crimes

One of the main reasons why the Bolivian Amazon is being degraded is to sustain the country's economic model. To reverse this trend, the forest must acquire value in itself. The government must set annual deforestation reduction targets – which it has so far failed to do – and provide greater accountability regarding deforestation, social control, and civil society participation.⁴⁵¹

This requires a bold re-imagining of Bolivia's economic incentives considering different possibilities including an international dimension. There should be a conference on Bolivia's environmental challenges which results in initiatives such as commitments with the international community to pay the country for each protected hectare.⁴⁵² The figure would be agreed between donors and the government and would finance projects to halt or dramatically reduce deforestation.⁴⁵³ In Colombia, President Gustavo Petro has proposed making payments of between US\$ 400 and US\$ 600 to rural families to stop growing coca crops and instead preserve the forest.⁴⁵⁴

To obtain this international intervention, Bolivia should commit fully and irrevocably to protecting the environment over the aggressive agribusiness expansion. All Bolivia's political parties and civil society groups should make coordinated statements that the environment is a national treasure and its constituency, consistent with Bolivia's plurinational political rhetoric. With international oversight of the commitment, Bolivia would receive rewards that could be equitably distributed throughout its economy, rather than being used to benefit international food companies.

Work hand in hand with local communities

An important way to reduce deforestation is to support local communities already protecting the environment. A good example is the “Reciprocal Water Agreements” project,⁴⁵⁵ which has paid nearly 24,000 farmers to protect 600,000 hectares and created 23 protected areas covering 3.4 million hectares.⁴⁵⁶

Promoting ecotourism is another option, as is encouraging the cultivation of domestic Amazonian species. Cocoa, almonds, and acai could finance lucrative yet sustainable projects that do not harm the forest.⁴⁵⁷ The government should immediately carry out land titling campaigns that give a portion of the money to local communities, so that they can solidify conservation and responsible forest use initiatives.⁴⁵⁸

Defend protected areas and Indigenous territories at all costs

The Bolivian government should invest in the surveillance of national parks, protected areas, and Indigenous territories, all currently infringing upon. It requires a greater presence of park rangers and police forces, such as POFOMA, and greater coordination between them. Top priorities should be facilitating the flow of information and ensuring the safety of park rangers. Reducing impunity is equally critical and can be addressed by expanding access to justice and tightening penalties. Frequent dialogue with local communities would aid these efforts.

Protected areas must be a top priority, which includes preventing corruption and improper influence on the agencies responsible for land titling. Likewise, laws designed to protect these areas from mining activities need to be effectively implemented, and new legislation should be crafted to eliminate loopholes. Currently, the state fails to withstand mining pressures in these areas, making it essential to develop tools dedicated exclusively to prohibiting such activities in parks and reserves.

Put out the fires

Bolivia’s fire departments need to be reinforced, and their personnel should be equipped with additional resources, equipment, and training. Moreover, there should be an emphasis on fostering collaboration between governmental agencies and civil society organizations, such as FAN, which has trained volunteer firefighters.

The government should reintroduce designated seasons during which the use of fire for land clearing is allowed. Additionally, penalties for setting fires outside these authorized periods should be heightened to include a substantial fine and a prohibition on utilizing the burnt land.

Redefine mercury use as a national public health crisis

Mercury contamination in rivers, protected areas, and Indigenous territories has reached irreversible levels. To protect people and ecosystems, the government should require mining cooperatives and large companies to adopt “best environmental practices” that gradually reduce mercury use and require special certification to import mercury, as stipulated in the Minamata Convention.⁴⁵⁹ This includes eliminating certain common practices in Bolivia, including the amalgamation of raw ore and the burning of amalgam in residential areas.

The government should also increase control and surveillance of mercury imports and their sale. In particular, it must prohibit the importation of mercury for mining. Bolivia cannot continue to feed illegal mining chains along the Amazon Basin.⁴⁶⁰

In January 2023, the country made progress on its Minamata commitments by announcing the launch of the “National Mercury Action Plan in Bolivia” and the “Planet Gold Bolivia” project. These two initiatives aim to kickstart the mining industry’s transition from mercury.⁴⁶¹ However, even without delays, they only start operating in two years. The government must therefore continue working for these initiatives to materialize and have the necessary financing for their operation and implementation.⁴⁶²

In the meantime, initiatives such as “Responsible Gold,” which has provided technical training to some gold cooperatives in Bolivia to separate the precious metal from the sediments without using mercury, should be expanded.⁴⁶³

Tackle corruption within environmental agencies and the business sector

As always, tackling graft is vital. Bolivia should create anti-corruption units within environmental agencies to facilitate detecting and interrupting illegal practices. The government should also strengthen its national anti-corruption framework to deter and better punish those who would bribe conservation officials.

Better control the soybean industry

The high demand for soybeans in international markets has led Bolivia to prioritize expanding soybean crops, even in forested areas. The government should forbid soybean cultivation in newly deforested areas. Additionally, it should offer technical support and financial incentives to encourage the shift from genetically modified (GM) to organic farming, possibly benefiting the producers with higher selling prices.⁴⁶⁴ Companies previously traded in Bolivia soybean exports must show an environmentally friendly certification.

Fight illegal mining

Besides arson, illegal mining is the criminal economy that has most damaged Bolivia’s environment. Law enforcement agencies must make it a priority and the government should accelerate the creation of its Council to Combat Illegal Mining. Besides the AJAM will be composed of the three ministries of defense, economy, mining, and metallurgy.⁴⁶⁵

Establishing these specialized executive structures has targeted specific environmental crimes in other countries. In Colombia, for example, establishing the National Council to Combat Deforestation (Conaldef), has made it possible to redirect efforts and strategies to better target environmental crimes.

The special unit should be able to dramatically expand the AJAM’s limited reach.⁴⁶⁶ The Bolivian government’s Senarecom should hire additional investigators to determine gold sourcing and amend their regulations to put more burden of proof on those who want to buy and export gold.

Bolivia should invite international monitoring from the UN Office of Drugs and Crime. UNODCS’s January 2023 guide to “Illegal Mining and Trafficking in Metals and Minerals”⁴⁶⁷ provides model legislation for a wide range of crimes associated with trafficking and its impact on the environment.

Increase access to information

The lack of digitized or electronic data on seizures, operations, and deforestation rates is another urgent issue. The Bolivian state should work with the international development banks and other donors, and non-governmental environment watch organizations, promote the creation of free access platforms to monitor its progress against environmental crimes. The transparency of this information is vital, both to coordinate efforts and identify key points of attention for the authorities. Bolivia should sign and ratify the Aarhus Convention of 2001,⁴⁶⁸ which establishes the rights of the public concerning the environment, including the people's right to participate in decision-making.

Promote increased cooperation with other Amazon-country governments

As highlighted in previous reports, the Bolivian government needs to improve international collaboration by establishing closer and more consistent cooperation with neighboring countries to combat cross-border timber trafficking, illegal mining, and wildlife trafficking. Joint operations aimed at the hotspots of these illicit activities should be conducted with the support of international organizations like Interpol. Moreover, Bolivia should join forces to aid and protect local communities in the Amazonian borderlands that are vulnerable to environmental crime. This support could include offering economic alternatives, providing training for land monitoring, strengthening law enforcement, and leveraging existing multilateral cooperation platforms, like the ACTO.

End notes

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