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BETWEEN BORDERS AND STATES:

Illegal Mining and Mercury
Trafficking in the Amazon

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Introduction

The Amazon is facing a growing set of pressures that combine accelerated environmental degradation, the expansion of illicit economies, and the fragility of state presence. This convergence transforms the biome into a space of territorial and political dispute, where the boundaries between the legal and the illegal are becoming increasingly blurred. Among the drivers of this crisis, illegal gold mining and mercury trafficking occupy a central position, both because of the environmental and health impacts they produce and because of the way they connect the Amazon rainforest to transnational chains of trade, finance, and logistics.

The dynamics that sustain this mechanism, however, do not originate in the forest. Amazonian countries are not producers of primary mercury, and no commercially viable deposits exist within their territories. The mercury used in illegal gold mining (artisanal and small-scale gold mining, ASGM) is imported largely through informal or clandestine channels, via international supply chains involving producers, intermediaries, and transit countries before reaching the Amazon basin.

The flows connecting the Amazon to these circuits go beyond commercial exchange: they involve international triangulation, regulatory arbitrage, and the strategic rerouting of operations in response to tightening restrictions in certain countries.¹ In this context, an interdependent dynamic emerges: mercury—an essential input for gold amalgamation—enters the forest through opaque channels, while the extracted gold enters formal circuits of trade, often far from the territories where socio-environmental impacts are concentrated.

The Amazon's borders are frequently presented as obstacles to addressing these illicit activities, although, in isolation, they are not sufficient to explain their persistence and adaptability. The combination of extensive border zones, distinct regulatory frameworks, and uneven institutional capacities across countries expands the opportunities for transnational illicit networks. However, by diverting attention from state responses generated within countries and attributing the problem primarily to borders, the diagnosis tends to oversimplify the role of States. A closer analysis of the governmental actions and the institutional limitations that shape the effectiveness and continuity of Amazonian countries' responses to illegal gold mining can point the way to solutions.

It is from this perspective that the present study is developed. The research investigates how mercury trafficking and illegal gold mining are addressed through different forms of state intervention—criminal, administrative, regulatory, and territorial—and how these interventions combine, overlap, or become misaligned when illicit dynamics cross borders. The study is grounded in concrete experiences, examining where institutions manage to act effectively, where they encounter operational limits, and how those limits relate to the resilience of illicit supply chains and the actors who sustain them.

The analysis is structured around two case studies that illustrate, from different perspectives, the challenges of confronting illegal gold mining and mercury trafficking at the Amazonian frontier. The empirical cases are presented first, each organized around a distinct institutional architecture, shaped by the type of state response triggered by these illegal activities.

The first case focuses on the architecture of corporate networks involved in the mercury trade, their functioning, and the regulatory and control mechanisms that were or were not activated. The second is structured around an institutional architecture centered on the judiciary and state bodies tasked with protecting Indigenous peoples in voluntary isolation threatened by illegal mining. The focus in that case is to understand the reach of the judicial decision that safeguards Indigenous territories and to identify the transboundary effects of cooperation among the agencies responsible for protection and for preventing illegal mining.

To enable a cross-cutting reading of the cases, recurring patterns of institutional fragility and the limits of state responses have been systematized. Based on this comparative analysis, the final section consolidates conclusions aimed at strengthening institutional responses to illegal mining and input trafficking in the Amazon, with emphasis on both coordination among national bodies and regional cooperation.

“Both case studies illustrate, from different perspectives, the challenges of combating illegal gold mining and mercury trafficking across Amazon borders.”

Case Studies

This publication examines the challenges of institutional responses and regional cooperation in the face of one of the illicit economies placing the greatest pressure on the Amazon biome, through two case studies. Both illustrate, in complementary ways, the transnational dynamics of the gold production chain associated with illegal mining in the Amazon: one focusing on the pre-extraction phase—the arrival of an input considered illegal or subject to controlled use (mercury)—and the other on the post-extraction phase, highlighting the socio-environmental impacts of mineral exploitation and the mercury contamination on Indigenous peoples. The table below summarizes the two cases.

Table 1. Summary of the cases

Category	Mercury Case	Yuri and Passé Case
Scope	Transnational mercury trafficking for illegal mining	Threats to Indigenous peoples in voluntary isolation affected by illegal mining
Stage of the gold production chain	Pre-extraction (input): trafficking and distribution of mercury	Post-extraction: socio-environmental impacts
Institutional response	Criminal prosecution (Peru)	Precautionary judicial measure (Colombia, with the involvement of Brazil and Peru)
Main actors	Family business group, intermediaries, ² and Peruvian control, oversight, and justice agencies	Indigenous peoples, criminal groups, the Colombian justice system, and Brazilian and Peruvian diplomatic agencies
Transnational configuration	Amazonian borders with international connections	Tri-border area of Colombia-Brazil-Peru
Scale of the phenomenon	Multinational	Trinational
What makes the case transnational	Logistical and financial chain crossing multiple countries	Socio-environmental impacts shared across countries
Common challenge for the States involved	Holding individuals and legal entities operating transnationally accountable and preventing recurrence	Implementing protective measures without a binding trinational mechanism

Source: Igarapé Institute, based on information from the two cases.

Taken together, the cases show that the gold chain is organized and operates beyond national borders. In addition to internal challenges of institutional coordination and law enforcement, complex transnational challenges also emerge that expose the limits of the institutional responses currently available. This observation leads to a central question: which instruments do Amazonian countries have today, and which needs to be strengthened or developed in order to ensure effective responses to cross-border and transnational phenomena? To contribute to this discussion, the following sections present two case studies.

1. Mercury Trafficking: Reconstructing a Transnational Illicit Network

1.1 Origin and nature of the case

Mercury continues to supply illegal gold mining in the Amazon despite efforts to reduce its use since the Minamata Convention,³ due to the risks it poses to health and the environment. Its flow follows routes crossing Amazonian borders and the main international markets.

This section is based on two court cases adjudicated in Peru—one concerning the trafficking of chemical inputs and machinery for illegal mining, and another concerning a tax-related offense associated with mercury imports (aggravated customs revenue fraud). Both involve a group of companies linked to members of the same family whose mercury trading was investigated and deemed illegal by the competent authorities. To preserve the security and integrity of the research, the names of individuals and companies have been replaced by pseudonyms inspired by fauna (individuals) and flora (companies). The main actors are the brothers Lion and Leopard, from the Feline group.

Table 2. Summary of the key information regarding the legal proceedings in the mercury case

Category	Case description	
Scope	Trafficking of chemical inputs and machinery for illegal mining ⁴	Aggravated customs revenue fraud in mercury import processes ⁵
Key dates	<p>2013: illegal mercury trading identified by police</p> <p>2014: charges formalized</p> <p>2016: first-instance conviction; Leopard's defense files cassation appeal seeking modification of the sentence</p> <p>2018: the Tribunal de Casación⁶ upheld Leopard's appeal</p> <p>2019: Supreme Court sustained the <i>Tribunal de Casación's</i> reasoning, converting prison sentence to a rights-restricting measure</p>	<p>2006/2007: multiple mercury imports with fraudulent documents</p> <p>2008: investigation opened</p> <p>2010: charges formalized</p> <p>2019: first-instance conviction</p>
Prosecuting body	<i>Fiscalía Especializada en Materia Ambiental</i> (Specialized Environmental Prosecutor's Office) of Madre de Dios ⁷	<i>Fiscalía Especializada en Delitos Aduaneros y contra la Propiedad Intelectual</i> (Specialized Prosecutor's Office for Customs Crimes and Intellectual Property) of Callao ⁸
Adjudicating body	<i>Segundo Juzgado Penal Unipersonal</i> (Second Single-Judge Criminal Court) of Tambopata ⁹	<i>Juzgado Transitorio Especializado en Extinción de Dominio</i> (Transitional Specialized Court for Asset Forfeiture) ¹⁰
Investigated persons	Leopard, Toucan, and Macaw	Lion, Alligator, Parrot, Thrush, and Swallow
Location of illegal activities	Mercury seized on the Interoceanic Highway (Peru-Brazil link), near Puerto Maldonado-Mazuko; illegally traded in Puerto Maldonado for use in illegal mining in La Cachuela, Madre de Dios region ¹¹	Mercury imported from the United States to Peru; financial transactions between banks in Peru, United States, and Bolivia

continuation

Category	Case description	
Irregularities detected	<ul style="list-style-type: none"> - Mercury sold to unauthorized third parties - Mercury used in illegal mining 	<ul style="list-style-type: none"> - Supplying company had no active commercial registration in country of origin during transaction period - Bank transfers declared as loan repayments, not mercury sales - Declared value far below actual amount paid
Outcomes	Conviction of Toucan, Leopard, and Macaw for trafficking in chemical inputs and machinery for illegal mining	Conviction of Alligator and Lion as co-perpetrators, Parrot and Thrush as primary accomplices, in aggravated customs revenue fraud; Swallow acquitted (unaware of illicit nature of the import process, as employee)
Institutions involved in compliance/execution	<ul style="list-style-type: none"> - Police carry out the operation that seized the mercury, and initiated the investigation - <i>Juzgado Transitorio Especializado en Extinción de Dominio</i> formalizes the charges - <i>Segundo Juzgado Penal Unipersonal</i> of Tambopata convicts those involved - Tribunal de Casación accepts the appeal filed by Leopard's defense - Supreme Court of Justice upholds the <i>Tribunal de Casación's</i> reasoning and also grants the cassation appeal 	<ul style="list-style-type: none"> - Peru's tax and customs authority (Sunat) investigated mercury import operations, identified signs of customs fraud, produced an official report, and referred the case directly to a Provincial Criminal Prosecutor's Office - <i>Fiscalía Especializada en Delitos Aduaneros y contra la Propiedad Intelectual</i> of Callao filed formal charges - <i>Juzgado Transitorio Especializado en Extinción de Dominio</i> convicted those involved in the scheme
Key point	Although a first-instance conviction was handed down in 2016, available evidence indicates the case remains ongoing, with no final judgment. Following a cassation appeal filed by Leopard's defense and accepted by Peruvian courts, the original prison sentence was replaced by a rights-restricting measure ¹²	Although a first-instance conviction was handed down in 2019, available evidence indicates the case remains ongoing, with no final judgment. As of the publication of this report, it has therefore not been possible to determine whether the defendants served any sentence
Other procedural developments	In 2013, the same defendants were investigated for illegal mining by the 3rd Preparatory Criminal Investigation Court of Tambopata ¹³	In 2011, the 48th Provincial Criminal Prosecutor's Office of Lima opened a preliminary investigation against Lion and his Peruvian companies on money laundering charges

Both proceedings reveal the workings of the same mechanism, with fraudulent practices at the import stage and subsequent illegal distribution of the regulated input, exposing persistent weaknesses in the state’s capacity to control and oversee a product subjected to strict regulation.

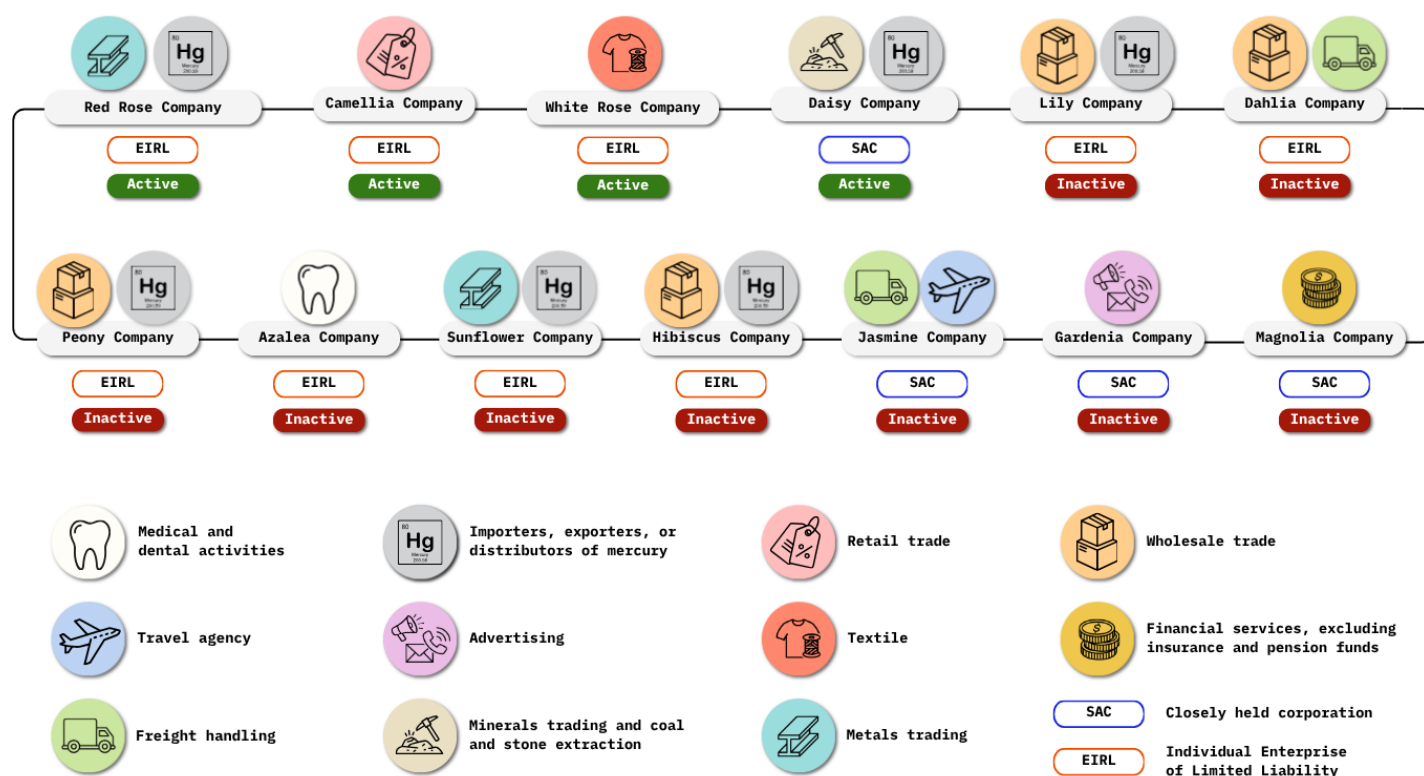
Since 1999, the Feline brothers (Leopard and Lion), shareholders of the group’s companies, have imported mercury into Peru.¹⁴ Although import operations ceased in 2022, the group remains active in the mercury trade according to information gathered in this research.

The brothers operate a network of companies registered in different sectors and countries—from dentistry to mining, logistics and foreign trade—to import, export, distribute, and

resell mercury, with illegal mining as one of the destinations. Despite this sectoral diversity, their activities are complementary and form an integrated mechanism sustaining different stages of the mercury chain. Dental companies can serve as formal justification for importing the substance under the guise of dental amalgams; while mining companies may claim the need for mercury in mineral ore beneficiation processes. At the same time, logistics and foreign trade companies facilitate the international circulation of the product, supporting its import, export, and distribution to other markets.¹⁵

This diversification allows a single economic group to control the entire chain, from acquisition to final supply, under the cover of apparently disconnected, in-principle legitimate activities.

Figure 1. Number and business sectors of companies belonging to the Feline family in Peru¹⁶



Source: Instituto Igarape, based on public company data from Peru’s National Superintendency of Public Registries (Sunarp).

The first investigations involving the brothers began in 2008, when the National Superintendency of Customs and Tax Administration (Sunat)¹⁷ detected signs of fiscal irregularities in import and nationalization proceedings involving more than 20 tonnes of mercury¹⁸ shipped from the United States to Peru. The illegal acts were carried out by a group of individuals,¹⁹ with Lion, owner of the Sunflower company, acting as the manager of the import operations in Peru.

Investigations revealed a mercury import scheme using fraudulent documents in 2006-2007, across three different stages:

1. **Company with inactive registration:** the supplying company had no active commercial registration in the United States during the export period, making the provenance of the mercury unknown.²⁰
2. **Payment declarations misrepresenting purpose:** payments were declared to banks as loan repayments rather than mercury sales,²¹ in order to conceal the origin of imports and subsequent nationalization of the Peruvian market.
3. **Underevaluation to reduce tax liability:** values declared to Sunat were far lower than those actually paid.²² By submitting false declarations, the group avoided paying a substantial portion of import duties, calculated proportionally to transaction values.

Only in 2019, more than nine years after the customs fraud charges were filed and 13 years after the alleged frauds, Lion was convicted to eight years in prison, a fine, and civil damages (see Annex 4). Alligator, also convicted of tax fraud in this case, remains in debt to Sunat for the fiscal periods covering the 2006-2007 mercury import operations. The outstanding balance, equivalent to USD 373,061.51 in present value, is still unpaid, indicating that enforcement of the fine has not been completed.²³

In the meantime, Leopard, the other brother in the Feline group active in the sector, was investigated in 2013 for trafficking in chemical inputs and machinery for illegal mining and convicted at first instance in 2016. The case began with a police operation on the Interoceanic Highway²⁴ — a road linking Brazil and Peru that became known in the last decade for facilitating illegal gold mining in the region. During the operation, bottles of mercury destined for illegal mining²⁵ were seized. The *flagrante delicto* arose from the offense of unauthorized commercialization of the input.²⁶

The person who was stopped by the police operation provided the location where the product had been sold. Based on that information, the police went to the indicated establishment and seized approximately 216 kg of mercury,²⁷ whose labels displayed the brand “Mercury and Sun Felines,” bearing the Feline brothers’ surname on the seized product.

The mercury owner was Leopard, legal representative of Camellia. At the time, he presented documents proving the legal purchase of the substance by the importing company Red Rose, of which Leopard was also a partner. Although the importation of the mercury had occurred legally, its commercialization was directed toward unauthorized individuals and companies, as identified during the police operation on the Interoceanic Highway.

In 2014, charges were formally filed and in 2016, a first-instance conviction was issued (see Annex 3). In the same year, Leopard’s defense filed a cassation appeal granted by the Supreme Court in 2019, converting the prison sentence to a rights-restricting measure.²⁸ In addition to this charge for trafficking in chemical inputs (Peruvian Criminal Code, Article 307-E), the defendants, including Leopard, were also investigated in 2013 for illegal mining (Peruvian Criminal Code, Article 307-A), though the outcome of that case was not accessible.

A 2024 publication by Peru’s Ministry of the Interior reiterated that the Feline group, in addition to importing mercury, operated in the local distribution of the substance using fraudulent reports—inflating mercury consumption figures and selling surplus to unauthorized third parties²⁹—both in person and through social media platforms, like Facebook.³⁰ An analysis of the social media accounts of companies linked to the group indicates that sales were still taking place in 2026, including the dissemination of contact numbers and WhatsApp groups.

Despite investigations and first-instance convictions, the Feline group continued operating in the mercury market. Between 2010 and 2015,³¹ while Lion was already under investigation for customs fraud, Sunflower—the only company owned by Lion mentioned in the proceeding—carried out more than 60 mercury import operations from the United States, Spain, Mexico, the Netherlands, and Japan into Peru, totaling approximately 189 tonnes.³² The company also exported to Colombia, Bolivia, Mexico, Singapore, Canada, and the United Arab Emirates. Sunflower operated normally until 2015, when it ceased import and export activities, and was replaced by Daisy.

Since then, Daisy became the group’s sole importing company, having imported approximately three tonnes³³ of mercury from Mexico to Peru between 2018 and 2021.³⁴ Since the Minamata Convention entered into force in Peru in 2017, only four companies import mercury in the country, with Daisy as one of them. The company holds an active registration with Sunat authorizing it to buy, sell, import, export, and store mercury, with 180 tonnes approved in 2025.³⁵ Despite two criminal convictions, no final judicial decision involving the group’s companies has been identified.

In 2012, the 48th Provincial Criminal Prosecutor’s Office of Lima filed a money laundering charges against Lion and eight of his companies,³⁶ and in 2020 a tax investigation was opened involving Daisy. However, no further information on the status of those proceedings was obtainable.

1.2 Architecture of Illicit Activities

This section reconstructs, based on the concrete cases, the architecture through which transnational illicit networks—such as the Feline group— operate and adapt by exploiting institutional failures, regulatory gaps, and state discontinuities along the mercury supply chain.

Drawing on the two court cases presented in the previous section, which illustrate how the brothers were prosecuted and, to some extent, held accountable by the State, it is possible to understand the dynamics and strategies that have allowed the economic group to remain active in the market. The analysis of the proceedings reveals some of the illicit activities identified, while this section seeks to highlight the main strategies that enabled the Feline brothers to continue operating in the mercury trade.

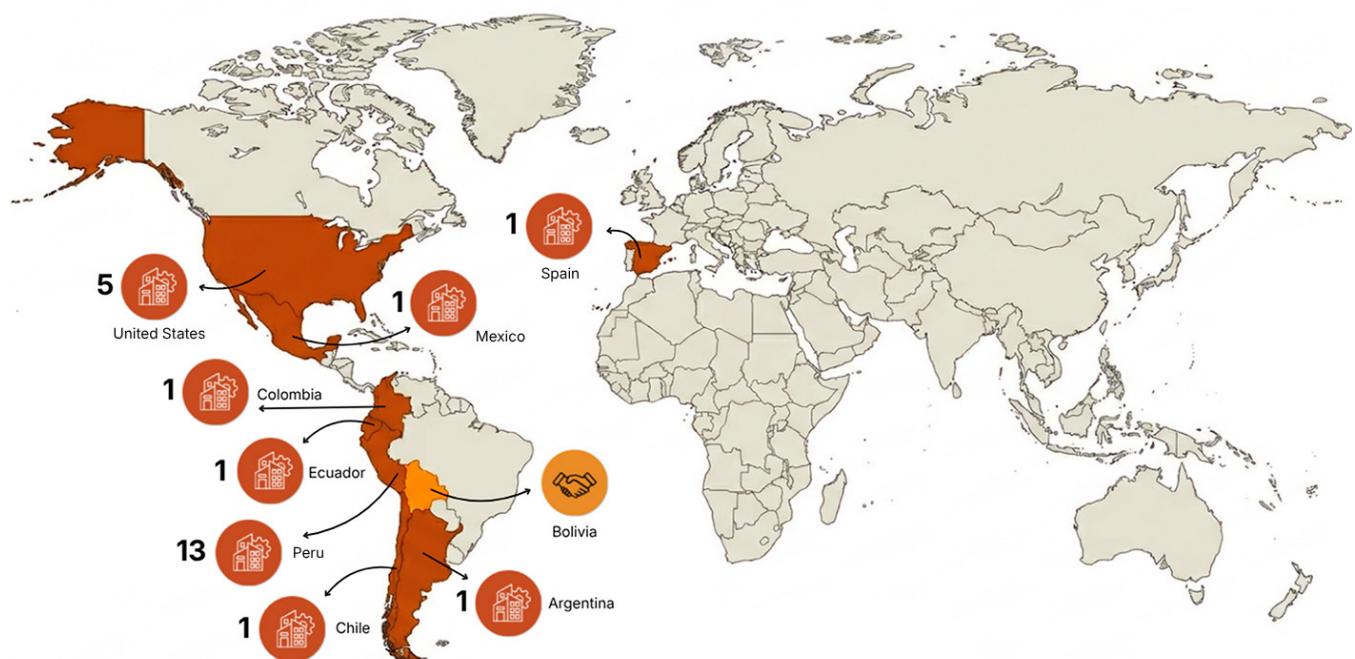
Complex Corporate Relationships

Over the course of the Feline brothers' business activities, multiple companies were created, modified, and shut down. Twenty-four companies registered under Lion's or Leopard's name were identified between 2000 and 2025—13 in Peru and 11 abroad. Most are sole proprietorships owned by Lion; though some have minority partners, including his wife and his brother Leopard. Leopard holds three other sole proprietorships in Peru. The Peruvian registrations are concentrated in Lima, Piura, and Madre de Dios, across diverse sectors.

This corporate complexity may serve legitimate purposes such as tax efficiency, but it also makes the group's activities more opaque to oversight bodies.

The group maintains or has maintained branches and subsidiaries of its companies in at least seven countries beyond Peru: Colombia, Chile, Ecuador, Argentina, Mexico, the United States, and Spain.

Figure 2. Branches, subsidiaries, and partner companies of the economic group



Source: Elaborated by Igarapé Institute based on criminal cases records and public data on import and export companies from Sunat and Peru's Ministry of the Environment (Minam).

Two examples—one involving the creation of a company and another involving a change in ownership—illustrate the strategy adopted to ensure the continuity of the group's commercial operations.

The internationalization strategy is designed to facilitate mercury foreign trade activities, and the choice of the countries in which companies are incorporated is not arbitrary. In the same year the Minamata Convention was signed, in 2013, and in response to shifts in the global mercury trade landscape, Leopard opened Orchid Company in Mexico. Incorporated for the purpose of importing various goods and industrial products, trading chemical products for the mining industry, and selling mercury chemical products, the company was used in attempts to import mercury by other group companies in Peru. Mexico has become one of the world's leading mercury suppliers³⁷ and, since 2013, has been the sole supplier country for the Felinos group.

Ownership of Red Rose Company was transferred from Leopard to Ocelot in November 2016, while Leopard was facing criminal proceedings for illegal trafficking of inputs destined for illegal mining. It could not be confirmed whether the change in commercial registration is linked to the charges, which culminated in Leopard's conviction in December 2016; however, the company was spared from restrictions on trading mercury under the new ownership, holding a valid authorization to trade the input through the completion of this research in February 2026.

At the time of this report, only five companies in the group were active—four in Peru and one in the United States (opened in 2025).³⁸ Of these, two held valid authorizations to carry out mercury-related activities in Peru: Red Rose and Daisy.

Adaptation to regulatory constraints

The group's mercury import and export flows span the Americas,³⁹ Europe,⁴⁰ and Asia.⁴¹ Over the group's first decade (1999-2011), imports came mainly from the United States, Spain, and Mexico.⁴² Following the European Union's 2011 mercury export ban and the United States ban in 2013,⁴³ the Mexico-Peru route⁴⁴ was the only one that remained active. In addition to Lion, who initially imported as an individual, six of the thirteen Peru-registered companies imported mercury at least once between 1999 and 2021. The group also has records of mercury exports between 2005 and 2014 to countries in the Amazon basin, including Colombia, Brazil, Guyana, and Bolivia.

In addition to subsidiaries and branches directly linked to the Feline brothers, the group maintains ties with companies and individuals connected to mercury distribution in Bolivia. Ocelot, who has held ownership of Red Rose Company in Peru since 2016, also owns Lavender Company in Bolivia. The Reptiles family, another Feline group ally, also operates a company in Bolivia—Tulip, founded by Alligator, who was convicted of customs fraud alongside Lion. Both Tulip and Lavender are dedicated to the import, export, trading, and distribution of mining products and inputs in Bolivia.

To illustrate the group's regulatory evasion strategy, the successive mercury import attempts made by different companies belonging to the brothers or their partners are described below:

- Early 2022: Daisy (of which Lion is the majority shareholder) attempted to import 12,000 kg of mercury from Mexico. Peru's Ministry of the Environment (Minam)⁴⁵ banned the operation because the company's shareholders, representatives, or directors were involved in a tax investigation for environmental contamination through illicit chemical input trafficking.⁴⁶
- Same year: Red Rose (formerly owned by Leopard until 2016) attempted to import 4,600 tonnes of mercury from Orchid, a Mexican company also part of the same economic group in which Leopard appears as founding majority partner. The import was denied on the grounds that the raw material originated from a primary extraction site in Mexico, prohibited by the Minamata Convention.
- Also in 2022: Bolivian company Violet successfully imported 12,000 kg of mercury from Mexico, this time into Bolivia.

It is worth noting that Violet uses the same contact email as two other group-linked companies—the Peruvian Red Rose and the Bolivian Lavender. These successive mercury import attempts, shifting between companies and responsible parties, demonstrate the Feline brothers' success in ultimately evading regulatory and enforcement agencies while maintaining an active presence in the mercury distribution market.

Concealment of beneficial owners

Of the 24 companies identified by the research as part of the economic group, at least 12 are currently inactive.⁴⁷ A recurrent pattern involves the abandonment, cancellation, or replacement of companies that assume the same functions of predecessor entities once these are exposed or investigated. This practice enables continuity without the burden of a prior history and hinders accountability: dissolving the investigated legal entity extinguishes administrative and civil liability, creating an

institutional shield that weakens oversight and legitimizes the persistence of operations under the guise of a new company.

Other strategies identified include:

- Company ownership transfers with no real change in who exercises control or holds decision-making power;
- Bank transfers using third-party accounts, even when the Feline brothers are the beneficial owners;
- Use of partner networks to: (i) maintain registration of the mercury brand; and (ii) conduct foreign trade operations under companies not subject to investigation.

One indication that operational control does not always transfer with a change in ownership is that, although Red Rose was transferred from Leopard to Ocelot in 2016, Leopard still appeared as the company's representative in Sunat records as late as 2025.

These practices may constitute tax fraud through concealment of beneficial owners, and the individuals involved may be characterized as front men or straw owners.

One example of the network-based strategy used to maintain the mercury brand, in use since the early 2000s and well established among Peruvian buyers, is the the Feline group's commercial ties⁴⁸ with the Reptiles group. The trademark "Mercury Sun Feline" was first registered by Sunflower Company in 2004 in Peru, with a ten-year term, at the National Institute for the Defense of Competition and Protection of Intellectual Property (Indecopi).⁴⁹ When the Feline group's registration expired in 2015, the same trademark was registered in the name of Alligator's father, Crocodile, who is also a partner in Tulip Company, allowing the brand to continue being used in Feline group transactions. It is important to note that neither Alligator nor Crocodile, nor Tulip Company, hold a valid authorization to carry out any

mercury-related activity in Peru, as none of them maintain an active registration in the Registry of Controlled Goods (RCBF).⁵⁰

Overall, the beneficial ownership concealment practices employed by the group allow it to circumvent legal restrictions, administrative sanctions, tax liabilities, and other barriers to market participation,⁵¹ while also hindering asset tracing and the direct accountability of individuals for further violations.

Political Circulation

Official agency calendars show that between 2012 and 2024, group representatives met periodically with state bodies responsible for the mining sector and mercury supply chain. During this period, both brothers of the Feline group were investigated, charged, and criminally convicted, without this preventing their companies from continuing to operate or them from being received for Peruvian government meetings.

Lion and Leopard maintained institutional contacts with Peru's main mercury regulatory and oversight bodies.⁵² As corporate representatives, they held multiple meetings with high-level Peruvian government bodies, including the Ministry of the Environment, Sunat, the Ministry of Production, and the Presidency of the Council of Ministers.

As representatives of Daisy company, Lion and his wife participated in meetings with the Ministry of the Environment between 2017 and 2024. Throughout this period and through the time of this publication in 2026, the company has maintained authorization to conduct mercury-related activities⁵³ and is among the four companies that have imported the input in Peru since the Minamata Convention entered into force in the country in 2017.

Between 2022 and 2024, Leopard participated in meetings with Sunat and the Ministry of the Environment, the agencies responsible for authorizing mercury imports in the country. These meetings began in the same year that Red Rose Company had an import request denied. Since 2014 and through the time of publication of this report in 2026, Red Rose Company has also held authorization to conduct mercury-related activities.⁵⁴ Leopard was received by the agencies in his capacity as representative of Red Rose, according to Sunat's administrative records, although before Sunatp the registered owner was Ocelot, as previously mentioned.

The economic group's operations blend legal and illegal activities, using formal companies, obtaining regular authorizations, and conducting licit commercial transactions as a facade to conceal illicit practices. The boundary between legal and illegal is intentionally blurred, creating a gray area where illicit activity benefits from the infrastructure and permissions granted for regular operations.

The obstacles to dismantling the economic group are linked to the strategies it employs to remain active in the mercury market over so many years: multiple corporate layers, regulatory evasion, concealment of beneficial owners, and institutional capture of Peruvian government agencies. The group's transnational character and complex transactions complicate the identification of actors and conduct and, consequently, the accountability of the network as a whole.

2. Illegal Mining in Transboundary Indigenous Territories: Protecting the Yuri and Passé

2.1 Origin and nature of the case

In the Yuri and Passé case, the analysis shifts from the mercury's logistical and financial circuits to examine how illegal gold mining and mercury use in the Amazon basin affect territories occupied by Indigenous communities in voluntary isolation, producing conditions that demand swift, coordinated, urgency-driven state protection responses.

Table 3. Summary of key information on the Colombian Precautionary Measure for the Protection of the Yuri and Passé Indigenous peoples

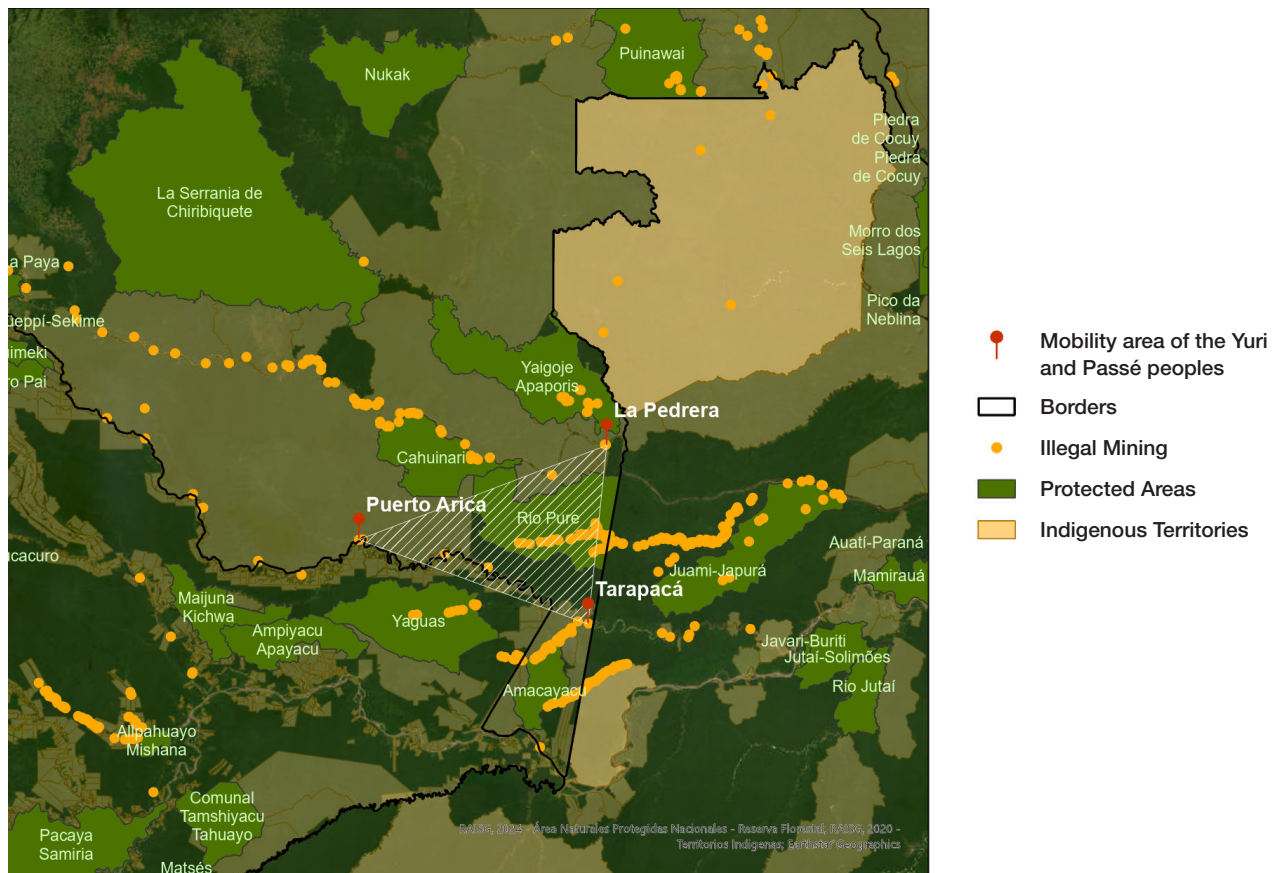
Category	Case description
Scope	Admission and issuance of a precautionary measure for the territorial, environmental, health, and sociocultural protection of voluntary isolated Indigenous peoples Yuri and Passé, in the face of illegal mining, natural resources exploitation, the presence of armed actors, and the imminent risk of contact.
Key dates	October 24, 2023
Adjudicating body	Juzgado Civil del Circuito Especializado en Restitución de Tierras (Specialized Civil Court of the Circuit for Land Restitution) of the Judicial District of Cundinamarca (Colombia).
Individuals investigated/responsible for illegal mining	Armed actors and criminal groups linked to illicit economies, including Revolutionary Armed Forces of Colombia (FARC-EP) dissidents, and third parties involved in alluvial illegal gold mining in the Puré River and intangible zone of the Rio Puré National Natural Park (PNN).
Location of illegal activities	Non-municipalized areas of Puerto Arica, Tarapacá, and La Pedrera, including the PNN Rio Puré and adjacent Indigenous reserves.
Detected irregularities	<ul style="list-style-type: none"> - Illegal gold mining and machinery use in a protected area - Mercury contamination in the Puré River - Risk of contact and health impacts on isolated peoples - Presence of armed actors - Territorial pressures from agricultural and missionary activities
Outcomes of the decision	<ul style="list-style-type: none"> - More than 20 orders to environmental, territorial, Indigenous, security, diplomatic, health, scientific, criminal enforcement, and oversight authorities - Territorial delimitation and creation of a buffer zone for the PNN Rio Puré - Illegal mining control operations and reinforced security in the Puré-Puruê corridor - Mercury contamination mitigation and monitoring plans - Implementation of binational actions with Brazil and Peru for territorial control and protection of isolated Indigenous peoples - Environmental sanctions and referral of evidence to criminal investigations related to illegal mining
Main institutions involved in implementation/enforcement	Ministry of the Interior (MinInterior); Ministry of Environment and Sustainable Development (MinAmbiente); National Natural Parks of Colombia (PNN); Corporation for the Sustainable Development of the Southern Amazon (Corpoamazonia); Ministry of National Defense (MDN); National Army of Colombia; National Police of Colombia (PNC); Attorney General's Office; National Protection Unit (UNP); National Land Agency (ANT); Ministry of Foreign Affairs (MRE); and Inter-American Commission on Human Rights (IACHR).
Highlight	First judicial decision in Colombia to comprehensively recognize the extreme risk posed by illegal mining to voluntary isolated Indigenous peoples and to establish an integrated set of measures exceeding national jurisdiction, including formal cooperation with Brazil and Peru for territorial protection and control of illicit activities.

Precautionary Measure No. 214/2023, issued by the Juzgado Civil del Circuito Especializado en Restitución de Tierras (Specialized Civil Court of the Circuit for Land Restitution) in Cundinamarca, Colombia, is a civil and preventive precautionary measure adopted within the Land Restitution System,⁵⁵ designed to protect collective territorial rights when conditions of gravity, urgency, and imminent risk are present.

The decision offers an opportunity to examine the legal and institutional contours of a precautionary measure applied to a territory whose dynamics are intrinsically transboundary. In the case of the Yuri and Passé, the measure was triggered in Colombia by the Special Administrative Unit for the Management of Dispossessed Lands Restitution (UAEGRTD),⁵⁶ following the identification of a consistent set of threats within their mobility area. In a technical dossier submitted to the court, the UAEGRTD demonstrated that the territory had been under pressure from the systematic expansion of illegal gold mining,⁵⁷ accelerating environmental degradation, the consolidated presence of FARC-EP dissidents, and the growing risk of forced contact. These combined pressures potentially compromise, in an irreversible manner, the territorial integrity, health security, and sociocultural continuity of the Yuri and Passé peoples, justifying the adoption of urgent judicial measures.

In this regard, the Yuri and Passé case illustrates a state response that prioritizes the preventive protection of territories and Indigenous peoples in the face of serious threats associated with illegal mining. From a legal standpoint, the Precautionary Measure is part of a broader movement toward consolidating state responsibility for environmental protection and the protection of populations in situations of extreme vulnerability.⁵⁸ The Inter-American Human Rights System recognizes the states' duty to adopt preventive measures⁵⁹ in the face of the risk of serious and irreversible harm, including contexts of environmental impacts that cross national borders. By extending protection for these peoples over a continuous ecological territory spanning Colombia, Brazil, and Peru, the case explicitly recognizes the need for regional coordination and shared responsibilities in the protection of common ecosystems.

Civil society action strongly influenced the construction of this response. Indigenous and socio-environmental organizations produced qualified technical information on the peoples' presence, mobility patterns, contact risk, and illegal mining impacts. This accumulated knowledge underpinned the official recognition of the Yuri and Passé peoples by Colombia and provided the basis for the adoption of the precautionary measure, highlighting the strategic role of technical exchange and cooperation between the State and civil society in identification and monitoring of peoples in voluntary isolation.

Figure 4. Mobility territory of the Yuri and Passé communities and the incidence of illegal mining

Source: Igarapé Institute, based on publicly available data on protected areas and Indigenous territories in Colombia, Brazil, and Peru; data on illegal mining derived from aerial surveys conducted by the Foundation for Conservation and Sustainable Development (FCDS), available in [Amazon Climate Security: Challenges amid the Expansion of Illicit Economies and State Weakness in the Caquetá–Japurá and Puré–Puruê Corridor](#); and information provided in Interlocutory Order No. 214/2023 regarding the mobility area of the Yuri and Passé peoples.

At the center of the legal measure are the Yuri and Passé Indigenous peoples, whose way of life depends on the safeguards adopted by the state. These groups inhabit the Amazonas department of Colombia, encompassing the non-municipalized areas of Puerto Arica, Tarapacá, and La Pedrera. Their territory forms a continuum of approximately 1.27 million hectares, centered on the Rio Puré National Natural Park (PNN) and extending through neighboring Indigenous reserves, especially Predio Putumayo and Curare-Los Ingleses,⁶⁰ at the tri-border junction of Brazil, Colombia, and Peru. Descendants of the pre-Hispanic peoples Yurimaguas and Yorimanes, they number between 400 and 500 individuals who maintain isolation as a historical strategy of physical and cultural safeguarding.⁶¹

This territorial configuration enables a pattern of occupation based on continuous mobility through the forest and along rivers, with communal longhouses (*malocas*) erected at strategic points and subsistence activities centered on small cultivated plots, hunting, fishing, and gathering. Mobility provides the group with dietary diversity, reduces exposure to external risks, and reinforces the principle of non-contact.⁶² This pattern finds correspondence in international law under the designation of mobile Indigenous peoples,⁶³ collectivities whose social organization is based on the communal use of territory, continuous circulation, and the sustainable management of natural resources. It represents a way of life intrinsically linked to biodiversity conservation and the reproduction of traditional practices of care and governance.

Although there are indications of up to 14 communities in voluntary isolation in Colombia,⁶⁴ only the Yuri and Passé have been officially recognized by the State—the first case of legal protection of this nature in the country. This safeguard was built gradually, with the creation of the PNN Rio Puré⁶⁵ in 2002 as its founding milestone, which secured for these peoples the full right to the use and permanent administration of their ancestral territories. Despite this legal framework, their survival remains under threat.

In view of this scenario, the Court identified illegal gold mining as one of the central threats, inserted into a broader set of illicit dynamics and pressures affecting the territory. The gravity of this activity stems not only from its illegality, but above all from its potential to violate socio-environmental safeguards. The legal order gives particularly serious status to its occurrence in intangible zones, spaces intended for the protection of traditional communities and sensitive ecosystems.⁶⁶ In the case of the Yuri and Passé, the legal action demonstrates that the systematic expansion of mining has crossed this limit, advancing into the intangible zone of the Rio Puré and violating the established protection framework, with immediate risks for these groups.

As documented in the proceedings, since the 1990s Brazilian mining barges have crossed the Puruê (Brazilian side)/Puré (Colombian side) River in search of gold. Official records indicate alluvial artisanal gold mining in this river since 2003, with continuous expansion between 2015 and 2019 and intensification from 2020 onward.⁶⁷ Pressure in the region is further aggravated by FARC dissidents and other armed groups that, since the 1980s, have used the Amazonas and Putumayo as corridors for illicit economies, including mining, drug trafficking, and illegal logging.⁶⁸ In 2020, these groups attacked facilities and expelled rangers from several national natural parks, including PNN Rio Puré, creating an authority vacuum that favored the expansion of illegal activities.⁶⁹

Between 2021 and 2023, aerial surveys conducted by the UAEGRTD documented dredges already inside the Park, causing habitat alteration, wildlife displacement, and encroachment of mining fronts into areas traditionally inhabited by the isolated peoples. Laboratory analyses attached to the proceedings also identified alarming levels of mercury in fish species consumed in the region, affecting a local population highly dependent on fishing for subsistence. Civil pressures were also detected, including the installation of agricultural and religious enclaves⁷⁰ on the park's periphery, amplifying the risks of forced contact and the threat of an epidemiological crisis in a group with no immunity to external agents.⁷¹

The cross-border character of the threat becomes even more evident when one observes that these dynamics are not limited to Colombian jurisdiction. The mobility of these indigenous peoples forms a continuum crossing Colombia, Brazil, and Peru, the integrity of which depends on free movement through the forest and rivers of the Puré/Puruê basin. This geography alone gives the protection of these indigenous groups a transnational character. Added to this is the fact that the Puré/Puruê River, where illegal mining activity is concentrated, is a shared fluvial corridor in which vessels regularly cross back and forth across the Colombia-Brazil border. The aerial surveys document dredges and barges operating simultaneously in both countries, showing that illegal mining relies on routes and flows that disregard political boundaries. Mercury contamination and pressure from armed dissident groups using the Puré-Putumayo corridor are distributed along a river basin and a transnational territorial network, reinforcing the need for a coordinated response among the three countries.

Two years after the precautionary measure was issued, this transnational character of the threats was formally recognized in Resolution No. 1635, issued by the Ministry of the Interior in October 2025, which declared an Early Urgent Preventive Warning (*Alerta Temprano de Prevención Urgente*) for the Yuri and Passé. The document draws on the same evidence registered in the judicial proceedings: pressures on the territory not only persisted after the Precautionary Measure No. 214/2023 but intensified, deepening the risks of forced contact, irreversible environmental degradation, and collapse of existing territorial safeguards. In reaffirming the Colombian state's duty to adopt special protection measures, the resolution makes explicit that mitigating these risks depends on strengthening internal interinstitutional coordination and, above all, on effective articulation with Brazil and Peru along the shared territory. With an initial one-year duration, the Early Warning extended the preventive regime inaugurated by the Preventive Measure, but also made visible a structural paradox of Amazonian governance.

2.2 Architecture of the State response

This section reconstructs the architecture through which the state response to illegal mining and threats to voluntarily isolated Indigenous communities was structured in the Yuri and Passé case, combining the content of the court orders with the responses actually adopted by the responsible authorities, as verified by Igarapé Institute research.

The state response stems from the diagnosis that environmental risks, territorial pressures, and threats to isolated groups overlap in the Puré River region, while the state operates through poorly coordinated sectoral structures. The judicial decision sought to impose an integrated logic of action in which territorial protection, environmental oversight, public security, criminal investigation, and diplomatic cooperation must function as parts of a single institutional arrangement. The effectiveness of

the measure depends not only on the formal existence of these competences, but also on the capacity to integrate them, sustain them over time, and ensure their coordination both internally and externally.

Interinstitutional coordination

The Preventive Measure is structured as an instrument of institutional coordination, directing orders to more than twenty Colombian state bodies,⁷² outlining a map of competences subject to continuous judicial monitoring. It recognizes that the Yuri and Passé protection cannot be achieved through isolated actions and imposes, at least formally, a logic of integrated action among ministries, environmental agencies, security forces, investigative authorities, and diplomatic entities. Some orders sought to control illegal mining through the development of operational protocols, machinery destruction, mercury seizure, and promotion of international cooperation.

This architecture, however, does not establish a centralized executive coordination body. Integration depends on the capacity of bodies with distinct mandates, asymmetric resources, and competing priorities. The result is an institutional arrangement that exists at the normative level but whose operationalization reveals persistent limitations when confronted with territorial dynamics, interagency interactions and the cross-border character of the illegal activities affecting the territory.

Territorial safeguards

The territorial implementation of the measure focused on the Ministry of the Interior, responsible for officially recognizing the Yuri and Passé peoples, delimitation of their mobility territory, and the definition of normative safeguards compatible with their way of life. The establishment, in 2024, of an intangible zone, for the integral protection of the territory of voluntarily isolated peoples, and a buffer zone to contain external pressures and regulate surrounding activities, constituted an important step forward, establishing a clear

legal basis for territorial protection. This normative framework strengthens the State's capacity to act preventively against invasion, economic exploitation, and environmental degradation, translating protection into operational spatial and legal criteria.⁷³

Environmental oversight

The Precautionary Measure assigns environmental oversight responsibilities to the Ministry of Environment and Sustainable Development, the National Natural Parks, and the Corporation for the Sustainable Development of the Southern Amazon (Corpoamazonia, see Annex 6), including monitoring environmental pressures, reviewing forest management plans, and applying administrative sanctions. In practice, the observed response concentrated on producing technical diagnoses and sharing information episodically, without adopting mitigation measures proportional to the gravity of identified risks.

Oversight in the Yuri and Passé peoples mobility area is sporadic and discontinuous, even in formally protected areas. Although actions occurred—such as the binational operation in December 2023,⁷⁴ involving Colombian and Brazilian environmental and security bodies—these initiatives did not consolidate into regular patrolling or permanent integrated operative protocols. The intimidation and expulsion of forest rangers from the PNN Rio Puré in 2020 by armed groups and illegal operators reveal the difficulties of maintaining continuous institutional presence in the territory, resulting in prolonged operational vacuums. In critical corridors such as Caquetá-Puré-Putumayo, mining fronts tend to resume activities just weeks after targeted interventions. The Attorney General's Office itself identified deliberate adaptation strategies by illegal networks, including sinking barges to hide equipment and avoid seizure, or moving floating structures to the Brazilian side of the border, revealing the low deterrent capacity of intermittent oversight. Operating in remote areas, combined with field teams vulnerability, and high staff turnover further deepen this structural control deficit.

Criminal investigation and administrative controls

Admission of the precautionary measure formally creates expanded conditions for criminal investigation and administrative controls, by converting any territorial violation or threat against the Yuri and Passé peoples into a potential direct breach of a court order. Practices such as illegal mining, deforestation, armed presence, or external incursions into delimited areas now entail criminal, administrative, and disciplinary accountability, elevating the legal level of territorial protection and providing more robust normative backing for the Public Prosecutor's Office, the Attorney General's Office, and international protection mechanisms.

However, translating this normative potential into effective practices reveals structural limits. Despite the intensification of illegal mining in the Puré region over the last decade, criminal prosecution remains limited, with few investigations and only one conviction for environmental offenses directly linked to mining activity in the territory. More recent cases have resulted in acquittals due to insufficient evidence, reflecting persistent difficulties in producing evidence in remote settings marked by violence and territorial control by illegal actors.⁷⁵

Complementary, administrative and disciplinary controls remain largely underutilized. Although the Attorney General's Office and the *Defensoría del Pueblo* (People's Ombudsman) formally take part in the monitoring bodies established by the decision, no consistent administrative accountability initiatives have been identified in response to omissions or violations repeatedly flagged by the judiciary itself. This gap between the legal reinforcement introduced by the precautionary measure and the limited activation of criminal and administrative mechanisms reduces its capacity to produce lasting deterrent effects in the territory, leaving the risks faced by the Yuri and Passé unaddressed.

Transboundary coordination of the State response

The cross-border dimension is both the most innovative and, at the same time, the most fragile aspect of the Precautionary Measure. The decision explicitly recognizes that the Yuri and Passé peoples' mobility territory is trilateral and assigns to Colombia's Ministry of Foreign Affairs the responsibility of activating bilateral and trilateral channels with Brazil and Peru, coordinating joint actions, and sharing relevant information. However, the research did not obtain responses from the Brazil or Peru's Foreign Ministries confirming their acknowledgement of the Colombian decision or their willingness to participate in discussions about the transboundary territory.

In practice, the cross-border response therefore remained limited. Despite relevant initiatives between Brazil and Colombia—the 2023 binational operation,⁷⁶ the joint high-level declaration,⁷⁷ and the resumption of bilateral mechanisms including the 10th meeting of the Binational Border Commission (Combifron) in 2024⁷⁸—these advances did not translate into an operational action plan. Interactions resulted mainly in political alignment and reaffirmation of commitments. No concrete verifiable developments related to the legal measure were observed; some issued orders were not formally received by competent foreign authorities; and there is no evidence of trilateral operational mechanisms in place.

In addition, the limitation of the legal instrument is central: the decision binds Colombian authorities but not Brazil or Peru. Its effectiveness depends on cooperation, political prioritization, and the operational capacity of neighboring countries. This is aggravated by normative misalignments: Colombia formally recognizes the Yuri and Passé peoples and establishes safeguards such as the intangible zone, while Brazil and Peru operate with varying degrees of institutionalization of such recognition, affecting competences, mandates, and the capacity for coordinated response.

3. Systemic Insufficiency of State Responses

This section revisits the Mercury and Yuri and Passé cases through a comparative lens in order to identify **recurring structural weaknesses and misalignments** limiting the effectiveness of state responses to illegal mining and mercury trafficking. More than isolated failures, the two cases reveal connections among the scale and adaptability of illicit economies, their relationship with markets and legal activities, and the way States organize their instruments of accountability, control, and territorial protection.

In both cases, States produced relevant institutional responses. Even so, these proved insufficient to interrupt the continuity of illicit activities by the same actors or to reduce socio-environmental pressures. The central problem, therefore, does not lie in the absence of state action, but in the difficulty of producing concrete results—due to, to some extent, the **complexity of articulating different criminal, administrative, and regulatory instruments into a coherent, integrated, and cumulative response**.

Based on the cases analysis, the research identified five central categories of misalignment:

- a) **Weaknesses in the justice system**
- b) **Implementation gaps**
- c) **Lack of institutional coordination**
- d) **Absence or inefficiency of transnational dialogue and cooperation**
- e) **Internal regulatory fragmentation**

This division is analytical and seeks to systematize patterns that emerged across the two case studies. In practice, however, these five misalignments do not operate in isolation; they overlap, interact, and often reinforce one another, producing interdependent weaknesses that limit the effectiveness of State responses.

3.1 Weaknesses in the justice system

Procedural delays contribute to the perpetuation of impunity cycles. Prolonged investigations, successive appeals, and the non-enforcement of sentences mean that accountability does not occur—or occurs belatedly—allowing the continuation of illicit activities. In the cases analyzed, the illicit conduct is detected and the decision is issued, but execution is flawed, leaving unchanged the material conditions that sustain illegality.

The Mercury case is emblematic. Frauds committed between 2006 and 2007 resulted in a first-instance conviction only in 2019. Moreover, neither the 2011 money-laundering investigation nor the 2020 investigation for chemical input trafficking involving group companies resulted in the interruption of activities or in deterrent effects on the offenders. Over more than two decades, the group maintained mercury import and commercialization operations without serving any sentence, paying any fines, facing administrative blocks or suspension of registrations, or any effective operating restrictions, on the activities of individuals, or legal entities, such as suspension from professional practice, a penalty applicable to those convicted of input trafficking that was later modified on appeal. Criminal prosecution thus coexisted with the continuity of the commercial mechanism supplying illegal mining.

In the Yuri and Passé case, the Precautionary Measure judicially recognized in 2023 that illegal mining, intensified in recent years in the Puré/Puruê corridor, posed a concrete risk to the survival of voluntary isolated Indigenous peoples. However, formal recognition of the risk did not translate into effective and sustainable interruption of illicit activities. Mining fronts continued to expand or reorganize after targeted interventions, culminating in the issuance of an Early Warning in 2025. Two years after the precautionary measure, the Ministry of the Interior acknowledged that the threats had intensified, without the preventive regime producing effects. The two decisions did not break the dynamics that sustained them.

In both cases, the justice system fulfilled a declaratory function but did not close the accountability cycle. When a decision generates no effect on the operational capacity of those involved, institutional delay ceases to act as a deterrent mechanism and becomes part of illicit actors' strategic calculations, favoring the continuity of the logistical, corporate, and territorial arrangements enabling illegal activity.

3.2 Implementation gaps

The structural limitations of implementing and sustaining state responses reveal the administrative dimension of the problem. The existence of judicial decisions or precautionary measures does not, in itself, ensure their effective execution or the institutional continuity of the actions ordered. Internal coordination failures, the absence of systematic monitoring, and operational discontinuity produce targeted responses that fail to address the magnitude of the phenomenon. The problem does not lie only in designing measures or issuing convictions, but in the inability to implement them.

In the Mercury case, this limitation appears concretely in Sunat's own performance. Despite investigations and convictions, the group's companies continued to hold mercury operating authorizations. This occurred despite the national regulation⁷⁹ and Sunat guidance⁸⁰ preventing registration for mercury-related activities to companies whose directors, legal representatives, or managers have been convicted of related offenses. The agency had a regulatory basis to restrict the activities but it did not implement the necessary mechanisms.

In addition, active debts in the name of Alligator and the Feline companies for tax obligations⁸¹ point to the difficulty of converting obligation into compliance. Although the State recognized the irregularities and recorded the corresponding obligations, this did not translate into value recovery or operating restrictions sufficient to impact continuity. This reveals weaknesses in monitoring, internal coordination, and administrative—and even criminal—enforcement mechanisms.

In the Yuri and Passé case, implementation of the Precautionary Measure was uneven and conditioned by the capacity and political will of the responsible agencies. Some measures were executed, others did not advance or were not sustained, revealing resource limitations, logistical difficulties, and coordination weaknesses. Even when executed, actions were targeted and insufficient to sustainably reduce territorial pressure. At the transnational level, the decision was not binding on the other countries, making its implementation depended on neighboring authorities' institutional capacity and political disposition—which, to date, has not been confirmed.

In both cases, the State produces decisions but faces structural limitations in implementing and sustaining them. When execution depends on unstable administrative structures, limited resources, and informal coordination among agencies or countries, continuity becomes uncertain and intermittent. The norm exists and decisions are formally issued, but they do

not translate into structured public policy with operational routines, monitoring mechanisms, and the capacity to produce lasting effects.

3.3 Lack of Institutional coordination

The effectiveness of state responses often depends on the coordinated action of multiple agencies with distinct mandates. When such coordination fails to materialize, each institution may formally fulfill its duties without the overall response producing measurable impacts. This dynamic becomes even more evident in intersectoral policies, such as the protection of Indigenous territories with mineral resources and under pressure from the expansion of illegal gold extraction networks. Institutional fragmentation differs from procedural delay and implementation constraints because it reveals the inability to integrate parallel actions into a common strategy capable of ensuring continuity and cumulative effects.

In the Yuri and Passé case, the Precautionary Order established an institutional architecture based on interdependence among environmental, security, health, defense, and foreign affairs agencies. The success of the measure depended not only on the isolated execution of formal mandates, but also on the coordination of complementary actions: enforcement and crime-fighting operations combined with territorial protection measures, international communication aligned with monitoring strategies, and administrative steps in tune with the judicial dimension. In practice, however, institutions advanced in parallel rather than in an integrated way. Whenever implementation required joint, sequenced, or simultaneous action, procedural obstacles and unclear responsibilities emerged, placing the measure in an operational limbo.

The Yuri and Passé case demonstrates that institutional fragmentation does not stem from a lack of action, but from the inability to transform dispersed initiatives into a cumulative response, limiting the structural effects of potentially relevant measures. Despite “early” warnings being issued and the measure seeking to prevent violations of Indigenous territorial rights, the absence of tangible effects risks delegitimizing state action. Meanwhile, non-state actors remain present and expand their influence through adaptability, connectivity, and capillarity—characteristics less evident in governmental action.

3.4 Absence or inefficiency of transnational dialogue and cooperation

Communication mechanisms between equivalent authorities in different countries do not always function effectively. The absence of clear procedures for international activation, difficulties in understanding the structure and organizational arrangements of counterpart agencies abroad, and the lack of permanent channels for information-sharing hinder both the circulation of information and coordinated actions. As a result, information often fails to reach the competent foreign authorities, producing isolated and discontinuous responses to organizations operating through networks and across multiple jurisdictions.

Brazilian and Peruvian authorities implicated in the Yuri and Passé decision were not even aware of the measure adopted by the Colombian state. Bodies that should have been mobilized to comply with the determinations, such as the Ministries of Foreign Affairs, reported not having received the Precautionary Measure. The absence of structured notification procedures and institutional referral channels compromises regional coordination limiting the measure to a predominantly domestic scope. Although the actions envisaged in the precautionary decision were not legally binding in the other

countries involved, they could nevertheless have been jointly discussed and developed among the countries. Beyond international legal cooperation itself, transnational dialogue and cooperation mechanisms, such as bilateral commissions, could have been mobilized for information-sharing and the development of joint action plans to confront the threats to the territory. Initiatives for cooperation between law enforcement agencies in neighboring countries to make investigations with cross-border implications more effective are a path to be considered.

In the Mercury case, legal cooperation and intelligence exchange among countries failed to limit the activities of the Feline group, which adapted to regulatory changes by internationalizing its operations, allowing its companies and business branches outside Peru, including Mexico, the United States, Colombia, Ecuador, to remain active. This absence of cross-controls, or the fact that illegalities detected in Peru did not produce extraterritorial effects, also indicates that dialogue among authorities across countries can be improved in cases involving inputs destined for illegal mining.

Uncertainty regarding activation protocols and the inefficiency of cooperation structures among countries constitute obstacles to the development of connected responses, revealing a mismatch between the nature of the illicit dynamics and the institutional framework available to confront them.

3.5 Internal regulatory fragmentation

Regulatory fragmentation does not occur only between States: it also reproduces within a single country, when different agencies regulate different dimensions of the same input without interoperability among registries and without alignment criteria. In such cases, the regulatory status recorded in one system produces no effects in others, opening space for internal forms of regulatory arbitrage.

In the Mercury case, the input is simultaneously subject to customs and commercial control (Sunat), environmental oversight (Minam), industrial regulation (Produce), and intellectual property registration (Indecopi). Despite this multiplicity of controls, each body operates with its own registries and criteria, without systematic mechanisms for cross-referencing or conditioning between registrations. The Registry for the Control of Monitored Goods (RCBF), administered by Sunat, requires operators to remain active and free of convictions for related crimes in order to maintain authorization. Indecopi, meanwhile, grants trademark registrations based strictly on intellectual property criteria—distinctiveness, novelty, and absence of conflict—without verifying the applicant’s RCBF status or the existence of convictions linked to the trade of the product itself.

Although some coordination exists between Minam and Sunat regarding import authorizations, this articulation does not extend to the other systems. In practice, the registries operate in parallel and independently. The result is a dissociation of regulatory effects: the same individual may lose authorization to operate with mercury in one system while simultaneously maintaining or obtaining registrations in another. In the case analyzed, group members managed to maintain and transfer trademark registrations even after convictions had become final, formally reconstituting a condition of legality already revoked in another instance.

This fragmentation is not limited to a bureaucratic communication failure, but constitutes a structural gap. The absence of uniform requirements, unified databases, and mutual-recognition mechanisms among public systems, capable of generating alerts and keeping suspicious actors under surveillance in the sector, enables the selective recomposition of formal regularity. As a result, a form of administrative shielding is created that prolongs the operational capacity of economic groups even after interventions by the justice system.

Internal normative misalignment reveals that the effectiveness of control over regulated inputs depends not only on the robustness of each sectoral framework (environmental, customs, intellectual property, corporate) in isolation, but on the coherence and coordination among them. As long as registration and authorization systems are not interdependent—whether through common criteria or through cross-referencing and blocking mechanisms—sanctions applied in one regulatory sphere may be systematically circumvented in another, within the same State.

Conclusion

This publication began from the premise that Amazonian borders constitute privileged spaces for the operation of illicit economies, functioning as zones of circulation, institutional arbitrage, and the strategic relocation of operations by non-state actors networks. Illegal gold mining and mercury trafficking are structured through chains that cross jurisdictions, exploit regulatory asymmetries, and adapt to normative and operational changes. In this context, the transnational dimension of these activities, combined with the lack of alignment among national regulatory frameworks, increases coordination costs between States, fragments responsibilities, and creates opportunities for illicit groups to redistribute risks.

However, a closer empirical examination of the cases demonstrates that the transnational dimension, while relevant, is not sufficient to explain the persistence of these activities. The cases show that the main obstacles to their containment are rooted in institutional weaknesses internal to the States themselves. Illegal mining and the illicit circulation of mercury are sustained less by the absence of laws or judicial decisions, than by the difficulty of articulating already existing instruments—criminal, administrative, regulatory, or territorial—into integrated, cumulative, and sustained responses. The central problem is therefore not normative in nature, but rather one of systemic insufficiency in state responses.

The mercury trafficking case reveals this gap at the early stages of the supply chain. Supply destined for illegal mining in the Amazon does not occur primarily in forest areas or at extraction sites, but through formal foreign trade operations—importation, exportation, transportation, and commercialization conducted through ports, customs authorities, financial systems, and corporate registries. These operations are carried out by formally constituted agencies

that internalize the input and redistribute it to illegal mining fronts in the Amazon basin. The main weaknesses are therefore concentrated precisely in the institutional spaces where the State, in theory, possesses the greatest capacity for intervention. Despite criminal investigations and convictions, companies and intermediaries linked to sanctioned individuals were able to maintain their activities by exploiting administrative loopholes, the lack of interoperability among state systems, and the absence of cross-controls between criminal prosecution, customs oversight, and authorization regimes. This indicates that the criminal response, although relevant, did not translate into administrative blocking measures, economic restrictions, or the effective interruption of mercury circulation.

The Yuri and Passé case shifts the analytical focus to the other end of the illicit chain, where the cumulative effects of these flows materialize directly in the territory. Illegal mining, driven by the continuous supply of mercury and other critical inputs, advances over protected areas and Indigenous territories inhabited by communities in voluntary isolation along a trinational area between Colombia, Brazil, and Peru. In this scenario, the border not only facilitates the displacement of mining fronts and inputs, but exposes the limits of state responses structured around strictly national mandates.

The precautionary measure adopted by the Colombian State represents an important effort to recognize the cross-border dimension of the risk and extend protection beyond domestic jurisdiction. Its implementation, however, exposed recurring weaknesses in internal operationalization, including fragmentation among agencies with interdependent mandates, gaps in administrative follow-up, and the lack of continuity in the execution of judicial orders. The inability to institutionally align these responses directly compromised the reach of the measure. Without consistent domestic execution, the decision faced obstacles in being communicated, articulated,

and effectively conveyed to authorities in neighboring countries. The case demonstrates that regional cooperation does not substitute internal state capacity, but depends on it as a precondition for its effectiveness.

Taken together, the cases demonstrate that mercury circulation and the expansion of illegal gold mining are not isolated phenomena, but interdependent stages of the same transnational mechanism, activated and sustained by domestic institutional weaknesses. Failures in the regulation, oversight, and control of this critical input reverberate directly in the intensification of environmental and territorial impacts. In this sense, the border acts less as a cause of the problem and more as a multiplier of institutional vulnerabilities.

The analysis further demonstrates that the early stages of the gold production chain constitute strategic intervention points, precisely because they are situated within national institutional arenas with greater normative density and operational capacity, such as customs authorities, corporate registries, licensing systems, and financial controls. Acting on these early links, especially on mercury circulation and other critical inputs, tends to be more effective and less costly than reacting in the later stages of the chain, when socio-environmental impacts have already materialized in the territory and require more complex and expensive responses. The absence of integration among these instruments, combined with the lack of continuity between different state actions, prevents investigations, convictions and precautionary measures from being converted into structural and lasting disruptions of illicit chains.

The capacity to act, both domestically and in cooperation with neighboring countries, depends not only on the existence of laws or agreements, but above all on the institutional capacity to coordinate institutions actions, maintain operational routines, and produce verifiable results over time. This requires progressively and realistically strengthening state agencies, ensuring clear mandates, sustained investments, minimum inter-institutional coordination, and administrative continuity. Judicial decisions, administrative sanctions, and territorial protection measures, when disconnected from one another, tend to operate episodically; when articulated, even with limited reach, they begin to generate cumulative effects capable of increasing the cost of illegality.

Putting one's own house in order does not mean assuming that Amazonian States possess full capacity or unlimited resources, but rather recognizing that illegal mining and related illicit activities generate systemic environmental, territorial, fiscal, and security impacts that justify treating them as a cross-cutting public policy priority. This requires concrete political choices regarding where to concentrate efforts, which links in the illicit chain to target first, and how to integrate already existing instruments in order to maximize their effects. Only from this minimum institutional foundation—however imperfect—will it be possible to project actions beyond the border and transform regional cooperation into an effective complement, rather than a substitute, for national responses.

Annex 1: Methodology

This publication adopts a qualitative methodology based on case studies aimed at analyzing **judicial proceedings** related to **illegal mining** and **input trafficking, such as mercury**, with a **transboundary dimension in the Amazon Basin**, focusing on Brazil, Colombia, and Peru. The limited number of cases simultaneously meeting all criteria led to the selection of **in-depth case studies** rather than a broad sample.

The methodological objective of the study was to examine how these cases were institutionally processed and to what extent existing mechanisms of judicial, administrative, and diplomatic cooperation were capable of ensuring accountability and territorial protection when illicit dynamics crossed national borders.

In this regard, the research was structured in **three main stages**:

Stage 1: Identification and Selection of Cases

- Information requests and consultations with government agencies⁸² in Brazil,⁸³ Colombia,⁸⁴ and Peru⁸⁵
- Dialogue with partner organizations

Stage 2: Data Collection

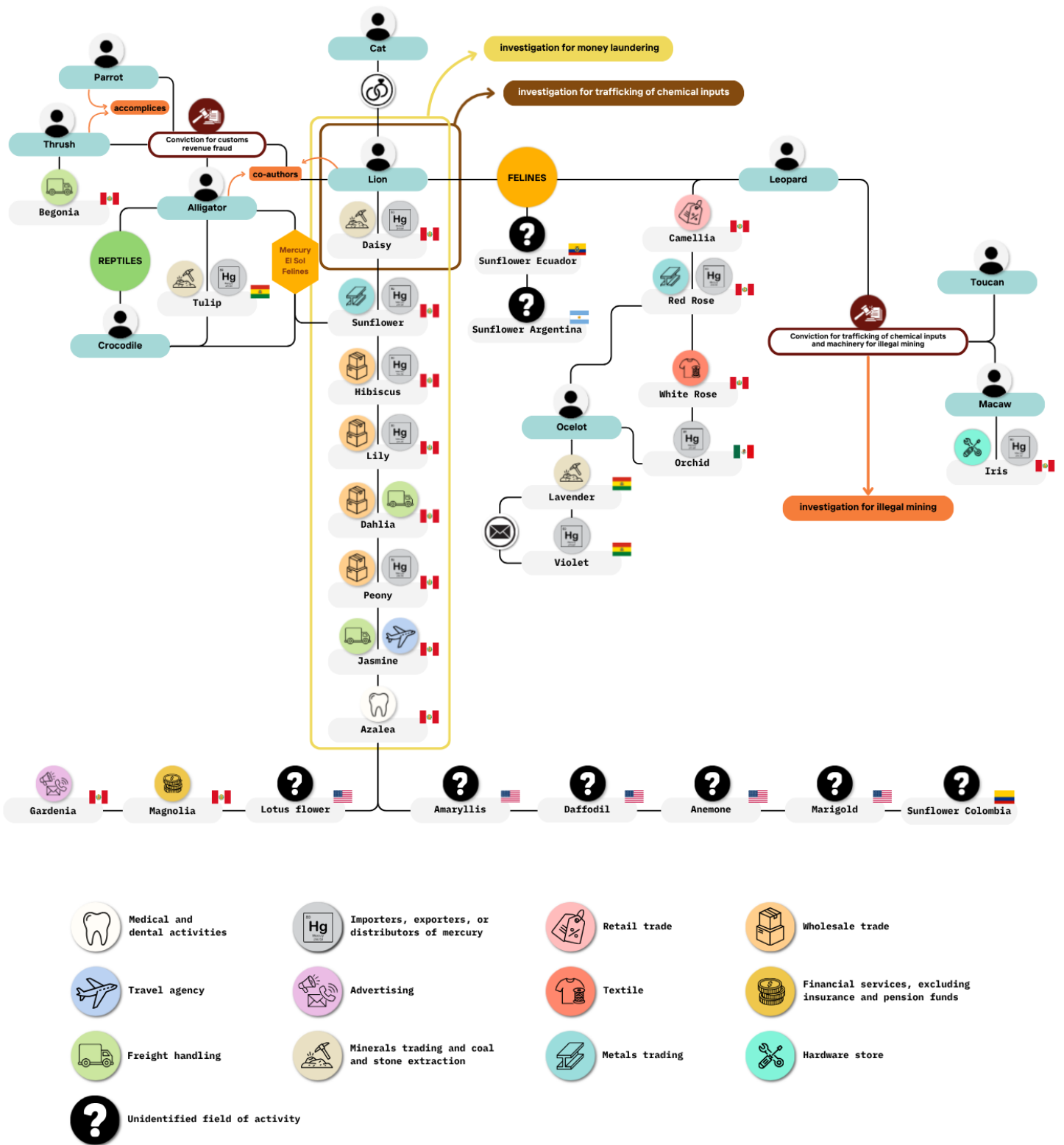
- At this stage, obstacles emerged as a result of the confidentiality of judicial proceedings, the absence of institutional responses to information requests, and the dispersion of information across agencies and countries.
- The solution adopted was the triangulation of sources, based on official information obtained through formal requests, judicial and administrative documents, specialized journalistic sources, and interviews with authorities and experts.
- For the Peruvian case, the research benefited from consultancy support by the Center for Climate Crime Analysis (CCCA) Colombia-Peru, which conducted a parallel collection of information using public administrative, tax, and judicial records from Peru as well as formal access-to-information requests.
- To prevent the identification of individuals and companies investigated by the Peruvian justice system, all names were anonymized. Companies were assigned names of plant species (flora), while individuals were assigned names of animal species (fauna), grouped according to zoological families to reflect their connections in the case: the central figures— two brothers— form the Feline group, while the remaining actors are referred to as Reptiles and Birds. This naming convention was adopted to facilitate understanding of the scheme of irregularities in the mercury trade and the identification of links among the actors involved in the case.

Stage 3: Processing and Analysis of Information

- Analysis of the main mining and mercury regulations in the countries involved in the case studies, allowing the identification of relevant normative gaps and regulatory asymmetries.
- Construction of a table based on common categories synthesizing the main weaknesses identified in the institutional responses to the selected cases.

Based on these three stages – **identification and selection of cases**, **data collection** and **processing and analysis of information** – it was possible to identify that the limits of institutional responses to transnational phenomena manifest even before reaching regional coordination instances. In other words, significant challenges are already observable within a single jurisdiction in dealing with illicit dynamics that cross national borders.

Annex 2: Mercury Case Structure



Annex 3: Defendants, Roles, and Sentences — Chemical Inputs and Machinery Trafficking Case

Defendant	Role	Related companies	Offense	Sentence (first-instance)
Toucan	Mercury buyer for use in illegal mining	n/a	Principal offender in the crime of illegal mining, in the modality of chemical inputs and machinery trafficking (possession and transportation)	No information available
Leopard	Importer, owner, and mercury seller	Manager of Camellia	Principal offender in the crime of illegal mining, in the modality of chemical inputs and machinery trafficking (acquisition, sale, distribution, commercialization, importation, possession, and storage)	4-year imprisonment; 100-day fine; civil damages of 5,000.00 Peruvian nuevos soles; 3-year professional suspension
Macaw	Owner of the establishment where mercury was sold; mercury seller	Owner of the commercial establishment 'Iris' in Puerto Maldonado	Principal offender of the crime of illegal mining, in the modality of chemical inputs and machinery trafficking (possession, sale, storage, and commercialization)	No information available

Annex 4: Defendants, Roles, and Sentences in the Customs Revenue Fraud Case

Defendant	Role	Related companies	Offense	Sentence (first-instance)
Alligator	Mercury buyer; falsified documents to simulate loan payments	n/a	Principal offender in the crime of aggravated customs revenue fraud	8-year imprisonment; 730-days fine; civil damages in the amount of 15,000.00 Peruvian nuevos soles
Lion	Intermediary and manager of import operations; instructed the falsification of reports so that transactions would appear not as mercury sales, but as loan payments	Legal representative of Sunflower	Principal offender in the crime of aggravated customs revenue fraud	
Thrush	Responsible for foreign trade operations; and together with Lion, in charge of nationalization of mercury in Peru	Manager of Begonia	Primary accomplice in aggravated customs revenue fraud	
Parrot	Legal representative of Alligator; signed the mercury import documents	n/a	Primary accomplice in aggravated customs revenue fraud	
Swallow	Responsible for the administrative procedures related to Lion's transactions	Administrative manager of Sunflower	Secondary accomplice in aggravated customs revenue fraud	

Annex 5: Institutional Mapping in the Mercury Case

Authority	Institutional Responsibility
National Superintendency of Customs and Tax Administration (Sunat)	Controls the importation, exportation, and trade of mercury, granting authorizations to companies and individuals
Ministry of the Environment (Minam)	Leads implementation of the Minamata Convention in the country. Through the Agency for Environmental Assessment and Enforcement (OEFA), oversees compliance with environmental legislation by companies, monitors mercury contamination, and applies sanctions. Also grants authorizations for cross-border mercury circulation
Ministry of Production (Produce)	Regulates industrial sectors that use mercury, authorizes productive activities, verifies safety standards, and oversees the activities of registered companies
Presidency of the Council of Ministers (PCM)	Performs functions of political coordination, intersectoral supervision of national policies, playing a strategic role in complex and cross-cutting issues such as control of chemical inputs
National Institute for the Defense of Competition and the Protection of Intellectual Property (Indecopi)	Responsible for trademark and intellectual property registration, consumer protection, and regulation of market standards. Mercury as a product may hold an official trademark registration at Indecopi, conferring a formal market recognition

Annex 6: Institutional Mapping in the Yuri and Passé Case

Authority	Institutional Responsibility	Measures Ordered (Precautionary Measure 214/2023)
<i>Juzgado Civil del Circuito Especializado en Restitución de Tierras</i> (Specialized Civil Court of the Circuit for Land Restitution Cundinamarca)	Specialized court responsible for territorial precautionary measures and collective rights protection	Admit and grant the measure, distribute orders, define deadlines, supervise compliance, reiterate the measure, and transmit the decision to the IACHR
<i>Unidad Administrativa Especial de Gestión de Restitución de Tierras Despojadas</i> (Special Administrative Unit for the Management of Dispossessed Lands Restitution - UAEGRTD)	Promotion of territorial actions; protection of Indigenous peoples and vulnerable communities	Monitor the judicial proceeding, participate in follow-up sessions, consolidate reports, and transmit information to the court
Ministry of the Interior (MinInterior)	Indigenous policy; people's recognition; territorial protection; interinstitutional coordination	Officially register the Yuri Passé, delimit territory and buffer zone, activate the National Commission and Local Committee, develop prevention plans, and submit a schedule within 15 days
Government of the Amazonas Department	Departmental territorial administration; coordination of regional public policies	Participate in prevention and contingency plans; support actions with neighboring communities
Ministry of Environment and Sustainable Development (MADS)	Environmental policy; forest management; natural resources and environmental illicit activities	Report permits in PNN, review forest management, initiate sanctions, and coordinate mercury contamination assessment
National Natural Parks of Colombia (PNN)	Comprehensive protection and management of national parks system, ensuring biodiversity conservation and control of incompatible uses	Define and protect the buffer zone, support monitoring, provide environmental data
Corporation for the Sustainable Development of the Southern Amazon (Corpoamazonia)	Regional environmental authority in Amazonas, Caquetá, and Putumayo	Participate in mercury contamination assessment, identify illegal mining hotspots, impose environmental sanctions
Ministry of Health and Social Protection (MinSalud)	National health and epidemiological surveillance	Integrate mercury impact assessment; incorporate health surveillance in the region
National Health Institute (INS)	Epidemiological and laboratory surveillance	Coordinate evaluation of mercury contamination and produce technical analyses
Alexander von Humboldt Biological Resources Research Institute (IAvH)	Ecological and environmental research	Participate in drafting mercury management protocol; assess ecological impacts
Ministry of National Defense (Mindefensa)	Defense and security; territorial control; operations in border zones	Guarantee sovereignty; ensure safe access for environmental authorities; issue permanent directive, coordinate binational operation with Brazil

Authority	Institutional Responsibility	Measures Ordered (Precautionary Measure 214/2023)
National Army	Public order and territorial control in remote areas	Control mining in the Puré: destroy machinery; execute mercury management protocols
National Police - Anti-Illegal Mining Unit (UNIMIL)	Repression of environmental crimes and illicit economies	Seize mercury; destroy machinery; develop new protocol if none exists
Fiscalía General de la Nación (FGN) - Attorney General's Office	Environmental criminal investigation; criminal prosecution	Investigate Criminal Code offenses; open cases based on environmental reports
Defensoría del Pueblo (People's Ombudsman)	Human rights monitoring	Monitor compliance with measures; issue alerts in cases of risk
Office of the Comptroller General	Disciplinary oversight and administrative accountability	Investigate and sanction authorities that fail to comply with court orders
National Land Agency (ANT)	Territorial management and Indigenous reserves governance	Report on expansion of Predio Putumayo and Cotuhe Reserve.
Presidential Agency for International Cooperation (APC-Colombia)	International cooperation coordination and government technical support	Conduct periodic monitoring overflights in conjunction with PNN and MinDefense
Office of the High Commissioner for Peace (OACP)	Incorporation of territorial safeguards into peace processes	Include protection measures for isolated peoples in negotiations with armed groups
Ministry of Equality and Equity (Minigualdad)	Social and ethnic policies; protection of vulnerable populations	Develop awareness and prevention strategies with neighboring communities
Ministry of Foreign Affairs (MRE)	Foreign relations; international cooperation; coordination with Amazonian countries	Coordinate actions with Brazil and Peru; demarcate Puré borders; install signage; propose binational buffer area
Inter-American Commission on Human Rights (IACHR)	International human rights monitoring	Receive copy of decision; monitor case at international level
Ministry of Agriculture and Rural Development (MADR)	Agrarian and rural development policy, interinstitutional coordination for territorial management and prevention of incompatible land uses	Support measure submitted by the URT; convene and coordinate interinstitutional spaces for execution of orders; support territorial rights of Indigenous peoples in voluntary isolation. Co-signed precautionary request. On November 7, 2024, convene an interinstitutional coordination and monitoring meeting, which found low overall compliance: as of that date, no order had been fully executed, though some entities had taken partial steps
- Association of Indigenous Authorities of La Pedrera Amazonas (AIPEA) - Indigenous Council of Tarapacá (CIMTAR) - Indigenous Association of the Puerto Arica Area (AIZA) - Piine Aiiyveju Niimue Iachimua (PANI)	Community territorial governance in areas neighboring Río Puré National Natural Park; territorial monitoring; local political representation; participation in territorial protection processes and prevention of contact risks	Participate in collective and individual risk assessments conducted by the National Protection Unit (UNP), collaborate in the development of prevention, awareness, and contingency plans, report threats, territorial pressures, and the presence of third parties, and integrate community protection actions coordinated by the Ministry of the Interior and the Government of Amazonas

Endnotes

1. Brazilian Intelligence Agency (ABIN) – 2025. [Mercury in the Amazon: transnational criminal networks, socio-environmental vulnerability, and governance challenges](#)
2. Intermediaries, in this case, refer to individuals who participated in some way in the activities of the Feline group in relation to the mercury supply chain, whether in import logistics, the nationalization of the input in Peru, or even the transfer of trademark registrations.
3. United Nations Environment Programme. [Minamata Convention](#) on Mercury.
4. The offense is established in the [Peruvian Penal Code](#), art. 307-E.
5. The offense is established in [Law No. 28008](#), arts. 4, 5(a), and 10(e, j).
6. The *Tribunal de Casación* is a high court responsible for reviewing judicial decisions on points of law. Rather than reexamining facts or evidence, it focuses solely on whether lower courts correctly applied the law, ensuring consistency in legal interpretation across the court system.
7. Peru's *Fiscalía Especializada en Materia Ambiental* is the specialized environmental prosecutor's office within Peru's national public prosecution system. It investigates and prosecutes criminal violations of environmental law, including illegal mining, deforestation, and pollution.
8. Peru's *Fiscalía Especializada en Delitos Aduaneros y contra la Propiedad Intelectual* is the specialized unit within the national prosecutor's office responsible for investigating and prosecuting customs crimes, smuggling, tax evasion, and intellectual property violations.
9. The *Segundo Juzgado Penal Unipersonal* in Peru is a first-instance criminal court in which a single judge presides over and decides cases, as opposed to a collegiate panel of judges.
10. The *Juzgado Transitorio Especializado en Extinción de Dominio* performs functions similar to those of a specialized court dealing with asset forfeiture, asset freezing, or confiscation of assets linked to illicit activities.
11. Information about the location of the activities was provided by the mercury buyer detained by police on the Interoceanic Highway, which led the prosecuting authority to consider the activities irregular before the competent authorities.
12. In Peru, “comparecencia con restricciones” is a precautionary measure that allows the accused to remain free to respond to the proceedings, but subject to restrictions and obligations aimed at preventing flight, obstruction of justice, and recidivism. It usually involves: the obligation for the accused to submit to the supervision of a specific person or institution; prohibition from leaving their place of residence, which may include passport retention; the requirement to immediately report any change of address; prohibition from communicating with certain individuals, provided this does not affect the right to defense; and the provision of a financial guarantee, if the defendant has the means. More information can be found in the [Peruvian Code of Criminal Procedure](#), article 287.
13. The crime of illegal mining is established in the [Peruvian Penal Code](#), art. 307-A.
14. Before the incorporation of the companies, Lion carried out imports as an individual (1999–2003).
15. See more information in the section on regulatory evasion, which contains all information on imports and exports carried out by the group.
16. The figure includes all companies belonging to the economic group in Peru, regardless of their current status. Currently, only four are active: Red Rose Company, Camellia, Sunflower, and White Rose.
17. For more information on the institution's responsibilities, see Annex 5 of the publication.
18. According to information in the case file, six exports were carried out from the United States to Peru, totaling 20,251.5 kg of mercury, over the years 2006 and 2007.
19. For more information on the individuals involved in the criminal scheme and their respective charges and penalties, see the table in Annex 4.

20. The Prosecutor's Office contacted consular authorities in the United States and confirmed that the company Carnation, which claimed to be the supplier of mercury in Peru, had been inactive since October 2002, years before the exports began. Although the judicial process did not confirm the link between Lion and Carnation, there are records of commercial connections between his companies in Florida and Carnation.
21. The information was obtained from testimonies of those involved and official communication with Banco de Crédito del Perú, through which bank transfers were carried out. Transactions were made to three accounts in banks in different countries: Citibank FSB (United States), Unión S.A. (Bolivia), and Wachovia Bank (United States). The account holder at Unión S.A. was used as a front, as she was unaware of the illicit nature of the transactions and was not the true beneficiary of the funds.
22. The declared values ranged between USD 1.17 and USD 4.00 per kilogram, while the actual payment was USD 23.18 per kilogram.
23. Public data show that Alligator's outstanding debt in Peruvian soles was PEN 1,251,621.37 in November 2025, equivalent to USD 373,061.51. The calculation was based on the exchange rate of February 26, 2026, when 1 Peruvian sol equaled USD 0.30.
24. The binational highway connecting Brazil and Peru has become known, over the past decade, for contributing to the expansion of illegal gold mining in the region, particularly in Madre de Dios, by facilitating the movement of labor and inputs. For more information, see: *Estadão* (2012), [Estrada Interoceânica: os impactos ambientais e sociais da rota do Pacífico](#); *O Eco* (2014), [Interoceânica, asfalto para o ecoturismo e o desmatamento](#); and the chapter "The first impacts of the Southern Interoceanic Highway in the Peruvian Amazon: between expectations of development and regional integration and the reality of illegal gold mining in Madre de Dios," available in [A integração sul-americana: o caso do Brasil e Peru. Dimensões históricas, políticas, culturais e ambientais](#), Prado Filho, C., Federal University of Mato Grosso do Sul (UFMS), 2020.
25. During the operation, police identified mercury containers and questioned the individual in possession of the material about its intended use. He stated that the mercury would be used in gold mining activities in which he participated as a guest, based on a verbal agreement and without proper authorization, which constitutes illegal mining activity.
26. To carry out activities involving mercury in the country—including production, storage, transportation, and commercialization—it is necessary to be registered in the Register for the Control of Controlled Goods (RCBF), administered by Sunat. Through [Legislative Decree 1103](#) of 2012, the Peruvian government established control and oversight measures over the distribution, transportation, and commercialization of chemical inputs that may be used in illegal mining, including mercury. In 2025, [Law 32412](#) repealed Legislative Decree 1103. However, until its entry into force, the provisions of the decree continue to be applied in a complementary manner.
27. According to the case file, 59 containers of 100 grams and 210 containers of 1 kg of mercury were seized at the site.
28. See note 12. Information about the location of the activities was provided by the mercury buyer detained by police on the Interoceanic Highway, which led the prosecuting authority to consider the activities irregular before the competent authorities.
29. Information obtained from a publication by the Peruvian Ministry of the Interior. Due to the anonymization of the case, a hyperlink to the original publication will not be provided.
30. According to the Peruvian Ministry of the Interior, one of the group's companies sold mercury in Facebook groups in the city of Juliaca, in the Puno region. In these groups, the input was offered in containers of 34.5 kg. Research on the companies' social media accounts indicates that the group continues to carry out this type of sale, now also in 1 kg packaging, in addition to 34.5 kg containers. A report from February 2026 indicates that the group's activities in mercury trade remain ongoing.
31. Only from 2010 onward was it possible to obtain information on the quantity of mercury imported by the company, although it had been importing into Peru since 2003.
32. The exact amount of mercury introduced into Peru by the company Sunflower between 2010 and 2015 was 189,411.92 kg.

33. The exact figure corresponds to 2,984.50 kg of mercury imported from Mexico to Peru between 2018 and 2021, across 15 import processes.
34. In 2016 and 2017, no company within the economic group imported mercury into Peru. This may be related to the ratification and entry into force of the [Minamata Convention](#) in the country, in 2016 and 2017, respectively.
35. Sunat has an online search mechanism that allows consultation of users registered in the [Register for the Control of Controlled Goods \(RCBF\)](#) and provides information on the approved quantity of mercury, the available volume, and the activities each user is authorized to carry out. Based on a system query conducted in February 2026, it was found that the company Daisy is authorized to operate with 180,000 kg of mercury.
36. The companies involved in the money laundering case are: Sunflower, Hibiscus, Jasmine, Dahlia, Peony, Azalea, and Daisy.
37. See footnote 45 and *Mongabay* (2025), [Mexico's rising mercury trade fuels toxic gold mining in Latin America: Report](#)
38. For seven other companies in the group, it was not possible to determine their current operational status.
39. Imports were identified from the United States (1999-2006, 2008-2012), Chile (2007), Ecuador (2007), and Mexico (2008-2015, 2018-2021) to Peru, and exports from Peru to Colombia (2005, 2006, 2008), Brazil (2006), Guyana (2006), Mexico (2008, 2010), Canada (2009), and Bolivia (2014).
40. Imports were identified from the Netherlands (2009-2011) and Spain (2010-2011) to Peru.
41. Imports were identified from Japan (2010) to Peru, and exports from Peru to the United Arab Emirates (2009) and Singapore (2010).
42. Information collected from Sunat's online search system, which provides access to data on Single Customs Declarations (DUA).
43. [Regulation \(EC\) No. 1102/2008](#) (in force since March 2011, later replaced by [Regulation \(EC\) No. 852/2017](#) with the same provisions) and the [U.S. Mercury Export Ban Act](#) (in force since January 2013) restrict mercury exports in these countries.
44. The United States and Spain were major suppliers of mercury to South America until the 2010s. Strengthened regulation in these countries opened space for new suppliers: Mexico, China, and Indonesia. See *BBC News Mundo* (2020), [How illegal mercury trafficking has grown in South America in recent years](#)
45. Peru's Ministry of the Environment is the focal point for the Minamata Convention and the authority responsible for granting written consent for transboundary mercury circulation in the country.
46. A prosecutorial investigation by the Specialized Environmental Prosecutor's Office, initiated in 2020, allegedly motivated non-compliance with the requirements of [Supreme Decree No. 059-2021-EF](#) (Article 5, D) and Peruvian Legislative Decree 1126 of 2012 (Article 7, 2).
47. On November 30, 2025, a query to the National Superintendency of Public Registries (Sunarp) and to equivalent agencies in the countries where the other companies were established found that five companies in the group were active, twelve inactive, and, for seven of them, their status could not be confirmed.
48. This research identified commercial and corporate links between the families of Lion and Alligator since 2006, related to the imports that gave rise to the proceedings in which both were defendants for customs fraud. In 2015, the Feline and Reptile groups also transferred between themselves the registration of the trademark "Mercúrio El Sol Felinos" in Peru, according to information available from the National Institute for the Defense of Competition and the Protection of Intellectual Property (Indecopi) of Peru.
49. For more information on the agency's responsibilities, see Annex 5 of the publication.
50. Query conducted on December 17, 2025.
51. According to [Peruvian Legislative Decree 1126](#) of 2012, Article 7, among the conditions for carrying out activities subject to control: "Users, in order to carry out any of the activities regulated under this Legislative Decree, must have a valid registration in the Registry. To be incorporated into the Registry, as well as to remain in it, they must be previously active in the Single Taxpayer Registry and must comply, among others, with the following requirements:

(2) that users, their directors, legal representatives, and those responsible for handling controlled goods do not have a final conviction for illicit drug trafficking or related offenses. The regulation shall specify who bears responsibility for handling controlled goods.” Additionally, Sunat provides a [document with guidelines](#) for registration in the RCBF, and [Supreme Decree No. 059-2021-EF](#) establishes provisions related to the entry and exit of controlled chemical inputs from the country.

52. See Annex 5.

53. Lists are periodically published containing the users legally registered by Sunat to carry out certain activities with mercury. To access the most recent list up to the publication of this report, see: [Relación de usuarios del Registro para el Control de Bienes Fiscalizados \(RCBF\) autorizados a realizar determinadas actividades con Mercurio](#). To check the validity of a company, access the [Registry for the Control of Controlled Goods \(RCBF\)](#)

54. Ibid.

55. Colombia’s Land Restitution System, established by Law [1448/2011](#), creates a specialized civil jurisdiction aimed at protecting individuals deprived of their land or at risk, granting Land Restitution Courts the authority to adopt preventive precautionary measures, order interinstitutional actions, and safeguard ethnic communities facing threats to their territorial integrity. Although originally designed to address land conflict cases, these measures have evolved to encompass situations in which the territorial, physical, environmental, or cultural integrity of ethnic and traditional communities is at risk.

56. The Special Administrative Unit for the Management of Dispossessed Land Restitution (UAEGRTD) performs functions similar to state structures dedicated to land regularization and the restitution of territorial rights in contexts of illegal land appropriation, interfacing, land agencies, the Public Prosecutor’s Office, and the Judiciary. In Colombia, it is an administrative unit created by Law 1448/2011, responsible for identifying, investigating, and documenting cases of forced abandonment, delimiting areas at risk, and promoting territorial protection measures that support the work of the specialized jurisdiction. More information at: [www.urt.gov.co](#)

57. In Colombia, gold mining is illegal when carried out without a title granted by the National Mining Agency (ANM) or in prohibited areas, pursuant to the [Mining Code \(Law 685/2001\)](#), and constitutes the offense of “illicit exploitation of mineral deposits” under Article 338 of the [Criminal Code](#)

58. For comparative reference, see recent decisions of the European Court of Human Rights on expanded state responsibility in environmental and climate matters: [Verein KlimaSeniorinnen Schweiz and Others v. Switzerland \(Application no. 53600/20\)](#). (2024) Duarte Agostinho and Others v. Portugal and 32 Others ([Application no. 39371/20](#))

59. IACHR (2024), Precautionary Measure [MC-91-06, Tagaeri-Taromenane, Ecuador](#); IACHR (2024), Precautionary Measure [MC-262-05, Mashco Piro, Yora y Amahuaca](#) ; (2018) Advisory Opinion [OC-23/18](#), Environment and Human Rights

60. Regarding Indigenous reserves and the jurisdiction of local Indigenous authorities around PNN Río Puré: the Predio Putumayo Reserve (recognized in 2013) is administered by the Association of Indigenous Authorities of the La Pedrera (AIPEA), a regional Indigenous authority. In the Tarapacá region, the Cabildo Indígena Mayor de Tarapacá (CIMTAR) acts as an Indigenous governing body and has recognized intangible areas due to the presence of peoples in isolation. In adjacent territories, the Piine Aiiyveju Niimue Iachimua (PANI) exercises traditional governance of the Bora and Miraña peoples.

61. De La Cruz, N. P. (2014). [From contact to isolation: the resistance of the isolated Indigenous peoples Yuri and Passé in the settlement process of the Colombian Amazon](#)

62. Franco, R. (2012). [Cariba malo: conflictos armados, economías ilegales y pueblos indígenas aislados en la Amazonía](#)

63. United Nations. Indigenous Peoples’ Rights: Note by the Secretary-General. Report of the Special Rapporteur on the rights of Indigenous Peoples, José Francisco Calí Tzay. General Assembly, Document [A/79/160](#). July 16, 2024.

64. Amazon Conservation Team (2021). [Indigenous peoples in isolation or natural state in Colombia: a recent history of challenges to their protection](#)

65. Ministry of Environment of Colombia. Resolution [0764 of 2002](#), which declares, delimits, and regulates the Río Puré National Natural Park.
66. In Colombia, intangible zones and the prohibition of mining in highly protected territories derive primarily from Decree [622/1977 \(National Natural Parks System\)](#), [Law 685/2001](#) (Mining Code), [Decree 1232/2018](#) (protection of Indigenous peoples in voluntary isolation), and resolutions establishing specific protected areas, such as Río Puré National Natural Park (PNN Río Puré). According to Chapter II of Decree 622/1977, intangible zones are areas “in which the environment must remain free from even minimal human alteration, so that natural conditions may be preserved in perpetuity.”
67. Op.cit; Instituto Igarapé. *Amazon Climate Security*. Brasília: Instituto Igarapé, 2025. [Amazon Climate Security: Challenges amid the Expansion of Illicit Economies and State Weakness in the Caquetá–Japurá and Puré–Puruê Corridor](#)
68. Specialized Civil Court for Land Restitution of the Judicial District of Cundinamarca, Colombia. Interlocutory Order No. 214 (Case No. 2023-00063). Bogotá D.C., October 24, 2023.
69. InfoAmazonia (2022). [Funcionarios de Parques de La Amazonía o han podido regresar desde 2020 por amenazas](#)
70. Evangelical Association of the Israelite Mission of the New Universal Covenant.
71. Land is Life (2019). [Pueblos Indígenas en Aislamiento: Territorios y desarrollo en la Amazonía y Gran Chaco](#)
72. The remaining orders established by Precautionary Measure No. 214/2023, including specific assignments to each entity, are described in Annex 5.
73. Andes Amazon Fund (2025). [First-of-its-kind territory will safeguard Indigenous Peoples in isolation in the remote Colombian Amazon](#)
74. Agência Brasil (2023). [Federal Police, Obama, and Colombian Police dismantle illegal mining at the border](#)
75. The Specialized Directorate for Crimes against Natural Resources and the Environment (Dema), of the Prosecutor’s Office, recorded eight criminal reports related to the Puré and Caquetá river region. Among the highlighted cases, one resulted in a first-instance conviction for illegal mining using a dredge in the Caquetá River, in a protected area. The case included material and expert evidence of mercury contamination but was marked by significant procedural delay. Another case, resulting from a joint operation in 2019 that identified active dredges and captured seven individuals, remains without a ruling, with a risk of acquittal due to insufficient evidence, despite witness testimony, environmental expert reports and evidence gathered during the arrests.
76. See note 74.
77. Ministry of Foreign Affairs (2024). [Joint Declaration of the Presidents of the Republic of Colombia and the Federative Republic of Brazil](#)
78. Institutional Security Cabinet of the Presidency of the Republic of Brazil (2024). [GSI/PR participates in the X Combifron in Bogotá, Colombia](#)
79. [Peruvian Legislative Decree 1126 of 2012](#) (Articles 7, II; 10; and 18) and Supreme Decree No. 059-2021-EF (Articles 5, D; and 10, I).
80. [Orientación – Procedimientos de inscripción IQBF, 2024](#)
81. Debts of the companies Hibiscus in 2003 and 2004; Gardenia between 2013 and 2014; Sunflower in 2015 and 2016; and Daisy in 2024 and 2025.
82. In some instances, the requests for information and institutional consultations conducted as part of this research contributed to generating responses and stimulating coordination among national and foreign authorities. One example was the National Natural Parks of Colombia expressing willingness to coordinate with other entities and requesting additional information on illegal mining on the Brazilian side of the border, with the aim of strengthening cross-border cooperation.

83. In **Brazil**, requests for access to information were submitted to federal agencies responsible for criminal prosecution, enforcement, and international legal cooperation. Most of the identified proceedings were subject to judicial secrecy, rendering the data inaccessible even in anonymized form and precluding the selection of a Brazilian case study.

84. In **Colombia**, consultations with government agencies and partner organizations led to the identification of the precautionary measure analyzed in this publication. Information on this case was gathered through formal requests and institutional meetings conducted by the Igarapé Institute, including unpublished data not otherwise publicly available.

85. In **Peru**, initial case identification drew on consultations with specialized networks and partner organizations. The selected case involves an economic group engaged in the international mercury trade, with operations in the Amazon region. Research on this case relied on external consultancy specializing in the forensic analysis of environmental crimes. To protect the security and integrity of the research, fictitious names were assigned to all individuals and companies involved, and no references or links to the original sources that could enable their identification have been included.

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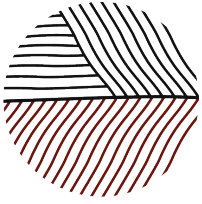
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