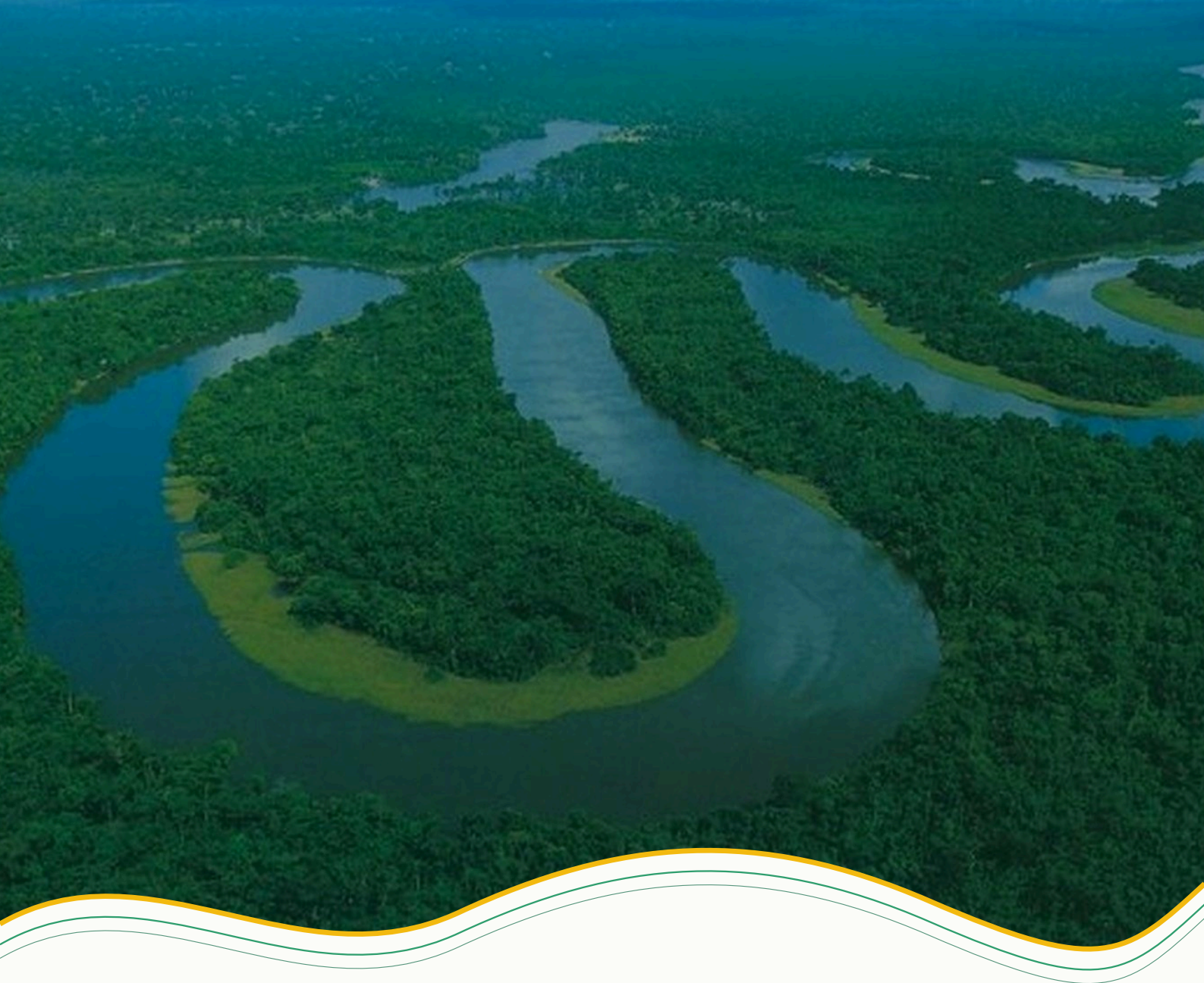




MINISTÉRIO PÚBLICO FEDERAL • FEDERAL PROSECUTION SERVICE OF BRAZIL

Illegal mining and mineral traceability in the Brazilian Amazon

The Federal Prosecution Service, the legal framework and two recent cases

Offices specialized in illegal mining • October 2026

MPF
Ministério Público Federal

Cover: river meanders in the Amazon seen from above. MPF archive.



INTRODUCTION

About this document

This document gives a short account of the work of Brazil's Federal Prosecution Service (Ministério Público Federal, MPF) against illegal mining in the Amazon, with attention to the question of the origin of the ore and to the traceability tools currently available in Brazil.

Written for an international readership, it explains in the first chapter what the Federal Prosecution Service is and why the same office can prosecute an offender and sue a company or a public agency. The second and third chapters describe the offences involved in illegal mining, the reason why the origin of the ore determines the charge, and how far the Brazilian system can currently trace gold and tin. Two recent cases follow, one criminal and one civil, and the last chapter gathers the findings and the areas in which cooperation between countries would help.

The facts come from court filings, judicial decisions and press releases published by the Federal Prosecution Service, together with the public sources cited in the text and listed at the end. Individuals under investigation or facing charges are not identified, and the companies involved are not named. In pending cases the facts are described as alleged by the prosecution, and the defendants are presumed innocent until a final decision. Procedural information reflects the latest available on 7 October 2026.

Amounts are given in Brazilian reais, and the US dollar equivalents shown in brackets are approximate, at a rate of about R\$ 5.10 to the dollar. A fuller account, covering other cases and the measures on mercury, logistics and regulation, is given in the companion report *Illegal mining in the Amazon: the structural work of the Federal Prosecution Service and its leading cases*.



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REFERENCE

Key terms

Federal Prosecution Service (MPF)	Ministério Público Federal. Independent institution that brings criminal prosecutions and civil actions in the public interest before the federal courts.
The Union	The federal government, which owns the country's mineral resources under the Constitution.
Garimpo	Legal term for artisanal mining. In the Amazon it is now largely mechanized and organized as a business.
PLG	Permissão de lavra garimpeira, the simplified artisanal mining permit, granted without prior mineral exploration.
Ghost permit	An artisanal mining permit that reports production although nothing is mined in the permitted area. A technical opinion issued by the mining regulator itself calls this situation ghost garimpo.
Usurpation of federal property	Extracting or trading minerals that belong to the Union without a mining title (article 2 of Law No. 8,176/1991).
Detention and imprisonment	Detenção and reclusão, the two custodial penalties of Brazilian criminal law. Detenção is the lighter and reclusão the heavier.
DTVIM	Securities dealer authorized by the Central Bank. In practice, the first buyer of garimpo gold.
ANM	Agência Nacional de Mineração, the National Mining Agency, which is the federal mining regulator.
Ouro Alvo	Federal Police programme that compares the profile of a gold sample with reference samples to indicate where it was mined.
Public civil action	Civil suit brought on behalf of society, used here to obtain reparation and court orders.
Structural action	Public civil action that asks the court to order and supervise the reorganization of a public policy or control routine.
Interim relief	Provisional court order that brings forward all or part of the relief sought, before the final judgment.
Collective moral damages	Compensation for harm done to the community as a whole, claimed in public civil actions.
GAECO	Special Action Group against Organized Crime, the unit of the Federal Prosecution Service for cases involving criminal organizations.



1

The Federal Prosecution Service

Under the 1988 Constitution, the Prosecution Service in Brazil is an independent institution, separate from the government. It has authority to prosecute crimes and to bring civil actions in defence of collective interests, including actions against the State itself.

An independent institution

The Constitution describes the Prosecution Service as a permanent institution, essential to the administration of justice, charged with defending the legal order, the democratic system, social interests and inalienable individual interests (article 127). It belongs to none of the three branches of government, whether the Executive, the Legislature or the Judiciary. Its members have the same guarantees as judges, namely life tenure and protection against removal from post and against reduction of pay, and each prosecutor decides his or her cases independently. The government cannot give it instructions, and public bodies are often defendants in the actions it brings.

Within that structure, the Federal Prosecution Service is the branch that acts before the federal courts. Illegal mining falls within its remit because, under the Constitution, mineral resources belong to the Union, that is, the federal government, whoever owns the land (articles 20, IX, and 176). Mining without a federal title therefore injures federal property as well as the environment, and the federal courts also hear the related offences, such as laundering the proceeds.

Criminal and civil authority

In criminal matters, the Federal Prosecution Service has exclusive authority to bring public prosecutions before the federal courts. The Federal Police conduct most investigations, under the external oversight of prosecutors, who decide whether to charge and for which offences and who may also investigate directly.

On the civil side, prosecutors can open civil inquiries, issue formal recommendations, sign conduct adjustment agreements (a form of consent agreement) and file public civil actions, which are civil suits brought on behalf of society. These instruments reach companies and public authorities alike. When the underlying failure is regulatory or administrative, the action becomes structural, in the sense that the



court is asked to order the reorganization of a policy or control routine and to supervise compliance over time.

INSTRUMENTS USED AGAINST ILLEGAL MINING

	Criminal matters	Civil matters
Investigation	Police inquiry, under external oversight, and criminal investigative proceeding	Civil inquiry and administrative monitoring proceeding
Negotiated outcome	Non-prosecution agreement	Recommendation and conduct adjustment agreement
Court action	Indictment, provisional measures against assets and criminal proceedings	Public civil action for reparation, for structural reform or to hold legal entities liable
Result sought	Punishment of those responsible and forfeiture of the proceeds of crime	Reparation of the damage and correction of the failure that made it possible

Offices specialized in illegal mining

Since August 2023, the Federal Prosecution Service has had offices in the Amazon dedicated to illegal mining cases, referred to here as the specialized offices. They handle the criminal prosecution of mining and related offences together with the corresponding civil actions, and they work jointly with the Special Action Groups against Organized Crime (GAECO) in cases involving criminal organizations. In the state of Roraima alone, 205 indictments for offences linked to illegal mining were filed between August 2023 and April 2026.

Combining the two functions has a practical effect, which the cases in this document illustrate. Evidence gathered in a criminal investigation can support a civil action for reparation and an action against the companies involved. Problems that recur from case to case, such as the absence of origin controls, can in turn be taken up in recommendations and structural actions addressed to the regulators. Contacts with foreign authorities are handled through the International Cooperation Secretariat of the Prosecutor General's Office.



2

Illegal mining and the question of origin

Garimpo, the Brazilian term for artisanal and small-scale mining, is now largely mechanized in the Amazon and run as a business. How the conduct is charged depends, first of all, on where the ore was extracted.



Scale

According to MapBiomias, the Amazon had about 241,000 hectares under garimpo in 2022, or 92% of the national total. Gold accounts for most of that area, followed by cassiterite, the ore from which tin is obtained. Instituto Escolhas identified 229 tonnes of gold with signs of illegality traded in Brazil between 2015 and 2020, almost half of national production in the period, and estimated that more than 90% of the Brazilian gold imported by Europe in 2023 came from areas at risk of illegality.

The Federal Police reported 447 kilograms of illegal gold seized in the country between January and early December 2025, including 214 kilograms in the state of Roraima, figures that give a sense of the volumes in circulation. In current practice, garimpo gold is recovered with mercury, at an estimated 1.3 to 1.5 grams for each gram of gold. Brazil produces no mercury and no company is authorized to import it for mining, so all the mercury used in garimpo is smuggled.

241,000 ha under garimpo in the Amazon in 2022 MapBiomias	92% of Brazil's garimpo area is in the Amazon MapBiomias	229 t of gold with signs of illegality, 2015 to 2020 Instituto Escolhas	447 kg of illegal gold seized in Brazil from January to early December 2025 Federal Police
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Ore mined in Brazil

When ore is extracted in Brazil without a title, two offences are charged together. The first is illegal mining, under article 55 of the Environmental Crimes Act (Law No. 9,605/1998), punishable by six months to one year of detention and a fine. The second is usurpation of federal property, under article 2 of Law No. 8,176/1991, which protects the Union's ownership of the mineral and is punishable by one to five years of detention and a fine. Detention (detenção) is the lighter of the two custodial penalties in Brazilian law, and the heavier one (reclusão) is rendered here as imprisonment.

Paragraph 1 of article 2 extends the same penalty to anyone who, without legal authorization, acquires, transports, processes, holds, consumes or sells the mineral. The offence therefore follows the product along the chain, which is how carriers, intermediaries and buyers come within its reach. Related offences are usually charged alongside it, among them the transport of mercury as a toxic substance (article 56 of the Environmental Crimes Act), money laundering, participation in a criminal organization, firearms offences and the subjection of workers to slave-like labour.



Ore mined abroad

Gold extracted in a neighbouring country, such as Venezuela, never belonged to the Brazilian Union and was mined outside Brazilian jurisdiction, so neither of those two offences applies. When it is brought into Brazil clandestinely, the charge is smuggling, under article 334-A of the Criminal Code, punishable by two to five years of imprisonment, together with any related offences such as money laundering.

The origin of the ore is therefore decisive in law. It determines the offence charged and the penalty, the legal status of the seized metal and the country whose authorities must be asked for evidence. In a seizure with no documents, as in the first case described below, that question has to be answered by other means.

WHERE THE ORE WAS EXTRACTED

	In Brazil	Abroad
OWNERSHIP	Property of the Union (Constitution, article 20, IX)	Never belonged to the Brazilian Union
OFFENCES	Illegal mining (article 55 of Law No. 9,605/1998) and usurpation of federal property (article 2 of Law No. 8,176/1991)	Smuggling (article 334-A of the Criminal Code)
PENALTIES	Detention of six months to one year and of one to five years, with a fine	Imprisonment of two to five years
REACH	Whoever mines and, under paragraph 1, whoever acquires, transports, processes, holds or sells the ore	Whoever clandestinely imports or exports goods that depend on authorization from a public body (article 334-A, paragraph 1, II)

Lawful and prohibited areas

Inside Brazil, two further questions about origin arise, the first being whether the area was open to mining at all. As the law stands, no mining title can be granted inside Indigenous lands (Constitution, article 231, paragraph 3), so that mining there by third parties is unlawful. The second is whether a title that exists on paper corresponds to actual mining on the ground. Titles that report production without any sign of extraction, known as ghost permits, are one of the ways in which illegal gold acquires a lawful origin, and they are discussed in the next chapter.



3

Traceability of gold and tin in Brazil

Brazil has tightened the rules on the gold trade since 2023, and the output recorded by garimpos has fallen sharply. The origin stated at the first sale is nevertheless still declared by the seller, and no comparable rule exists for tin.



Garimpo barges and dredges clustered on a river in the Amazon basin. MPF archive.

What exists

Gold from garimpo can be sold, the first time, only to institutions authorized by the Central Bank, in practice securities dealers known by the acronym DTVM. Until 2023 these buyers were protected by a legal presumption of good faith, under which the seller's own statement of origin was enough. The Federal Supreme Court suspended that presumption in April 2023 and struck it down unanimously in March 2025.

Electronic invoicing became mandatory for gold transactions in the same period. According to Instituto Escolhas, the output recorded by garimpos fell by 84% between January and July 2024, compared with the same months of 2022. Forensic origin analysis by the Federal Police, described at the end of this chapter, completes the tools now available.



What is missing

The origin entered on the invoice at the first sale is still what the seller declares. The invoice records that statement, but there is no routine physical verification at the mine site or at the point of first purchase, and no marking of the metal or digital registry of transactions is in force. Bill No. 3,025/2023, which creates a system of physical marking and digital registration, was approved by the Chamber of Deputies on 22 April 2026 and is pending in the Federal Senate.

Mining titles themselves can be used to disguise the origin of gold. According to the action described below, there are artisanal mining permits (PLG) that report production and pay royalties while satellite images show no mining in the permitted area. A technical opinion issued by the regulator itself calls this situation ghost garimpo, and its effect is to lend a lawful origin to gold extracted elsewhere.

On 7 July 2026 the Federal Prosecution Service filed a structural public civil action asking the federal court to order the mining regulator to cross-check royalty returns, annual mining reports and satellite imagery as a matter of routine and to reassess existing permits nationwide (Case No. 1036996-07.2026.4.01.3200). One example cited in the action is a set of thirteen adjoining permits held by a single cooperative and operated as one undertaking over 13,561 hectares. The regulator has moved in the same direction, and ANM Resolution No. 244/2026 now requires proof of actual mining for a permit to be renewed.



GOLD TRACEABILITY IN BRAZIL

What exists	What is missing
First purchase of garimpo gold restricted to institutions authorized by the Central Bank	Verification of the origin declared by the seller at the first sale
End of the presumption of good faith in favour of the buyer, by decision of the Federal Supreme Court	Physical verification at the extraction site and at the first purchase
Mandatory electronic invoice	Marking of the metal and digital recording of transactions, provided for in a pending bill
Forensic origin analysis by the Federal Police, used after seizures	A bank of reference samples broad enough for the analysis to be used preventively

Tin

For cassiterite and tin there is no legal traceability mechanism comparable to the one for gold. Ore of unlawful origin can be mixed with lawful ore at the first link in the chain, and without identified lots or a geochemical reference signature, origin has to be proved case by case through expert evidence. On 27 February 2026 the Federal Prosecution Service recommended that seven federal bodies create a national system for tracing cassiterite and tin, with mandatory lot-by-lot tracing



and a national geological database. The National Institute of Criminalistics and the Geological Survey of Brazil have confirmed that such a system is technically feasible.

Forensic origin analysis

The Ouro Alvo programme, run by the Federal Police since 2019, compares the chemical, isotopic and morphological profile of a gold sample with reference samples from known mining areas. The result is admitted in court as expert evidence, alongside documents, satellite images and financial data. Its precision depends on the breadth of the reference database, which is why the technique is still used, as a rule, after a seizure has taken place.

A broader database, with samples from more producing regions and from neighbouring countries, would allow the technique to be used preventively, by sampling at the first purchase, at the refinery and on export and comparing the result with the declared origin. Work to widen it is under way, including an agreement between Brazil and France and an Interpol training project built on the Brazilian method.



4

Criminal case: 103 kilograms of gold

In August 2025 a routine roadside inspection in Roraima led to what the judgment describes as the largest gold seizure ever made in Brazil. The gold was not accompanied by any document, and the case turned on what forensic analysis could say about the metal.

The seizure

On 4 August 2025, the Federal Highway Police stopped a pickup truck for a routine inspection on the BR-401 federal highway, in Boa Vista, the capital of Roraima. Hidden in a compartment built into the dashboard were 205 gold bars, 145 large and 60 small, weighing 103.106 kilograms and valued at R\$ 54,022,394.22 (over US\$ 10 million). There was no invoice, no mining title and no document of origin, and the driver was arrested at the scene.

What the forensic report established

The bars were examined by the National Institute of Criminalistics, the Federal Police forensic laboratory. The report identified unrefined gold in the form of a gold and mercury amalgam, with purity ranging from 58.77% to 99.89% from bar to bar, features typical of garimpo gold that has not undergone industrial refining. The finding concerns the nature of the metal and does not identify the place of extraction.

That answer was enough to define the charges, because gold extracted without a mining title remains the property of the Union, so that its transport falls under article 2, paragraph 1, of Law No. 8,176/1991. The mercury still present in the bars supported a separate charge of transporting a toxic substance, under article 56 of Law No. 9,605/1998, and the indictment also charged the offence of receiving the proceeds of crime (receptação).



FROM ARREST TO JUDGMENT

- 4 Aug. 2025** ● Arrest at the scene and seizure of 103.106 kg of gold, in 205 bars, on the BR-401 highway.
- Sept. 2025** ● Indictment filed jointly with the Special Action Group against Organized Crime (GAECO), just over five weeks after the arrest.
- 15 Dec. 2025** ● Conviction by the 4th Federal Criminal Court of Roraima, less than five months after the events.

The judgment

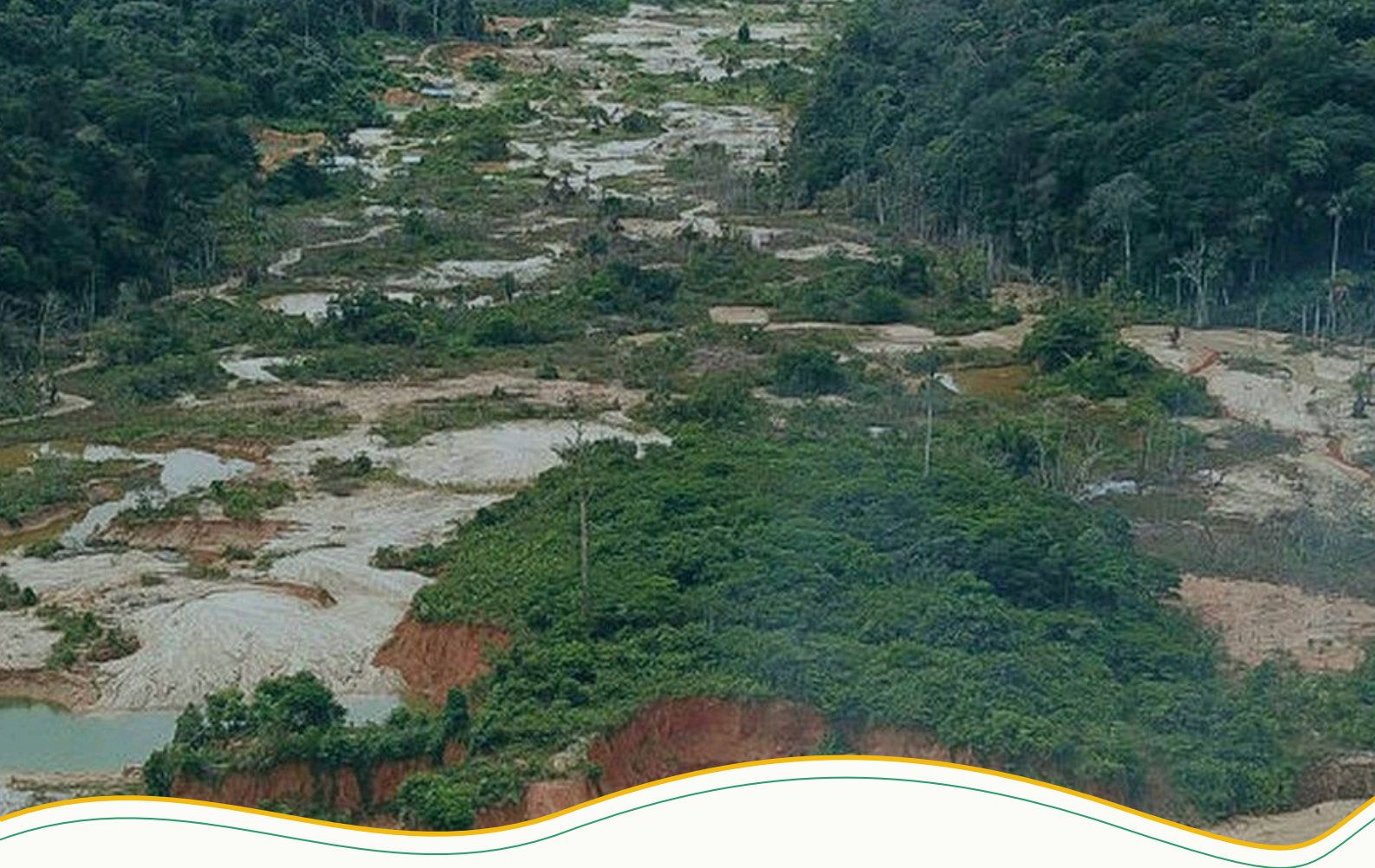
The court convicted the defendant on the two main counts and imposed consecutive sentences totalling 8 years and 11 months, to be served initially in a closed regime, that is, in prison, together with 89 day-fines. It held that gold in amalgam contains metallic mercury, a toxic substance in any of its forms, and applied the doctrine of wilful blindness to reject the claim that the driver did not know what he was carrying. He was acquitted of receiving the proceeds of crime, and the Federal Prosecution Service announced an appeal on that point and on its claim for collective moral damages, that is, compensation for harm done to the community as a whole. The judgment is a first-instance decision and remains subject to appeal.



CRIMINAL CASE · SEIZURE OF 103 KG OF GOLD		
CASE NUMBER	SEIZURE	VALUATION
No. 1007266-89.2025.4.01.4200	103.106 kg in 205 bars	R\$ 54,022,394.22
USURPATION OF FEDERAL PROPERTY		TRANSPORT OF A TOXIC SUBSTANCE
4 years and 10 months of detention and 48 day-fines		4 years and 1 month of imprisonment and 41 day-fines

What the case shows

The case shows both the value and the present limit of forensic evidence. The laboratory established what kind of gold had been seized, which was sufficient for a conviction in less than five months. It could not match the gold to a specific mining area, because that depends on reference samples that are not yet available in sufficient number. The investigation into those who financed the load and those who were to receive it continues.



5

Civil case: Operation Forja de Hefesto

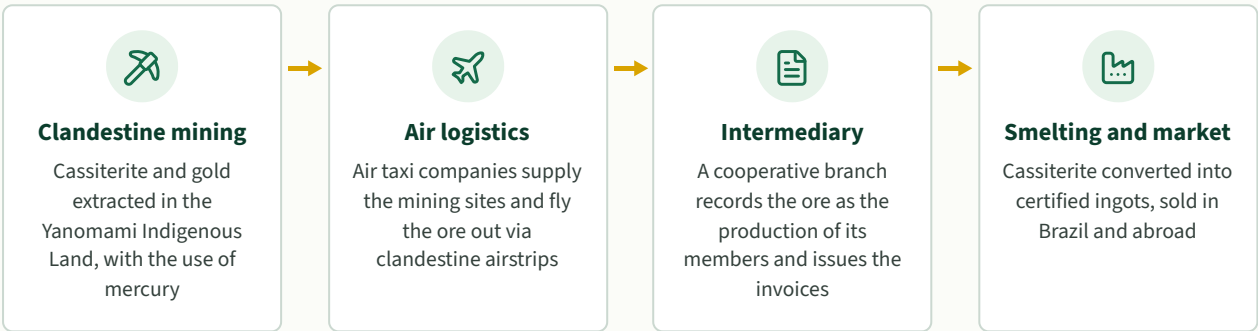
Operation Forja de Hefesto centres on tin and on a supply chain in which the documents were formally in order. It is the largest illegal cassiterite case brought by the specialized offices, and it led a federal court to order a smelter and a cooperative to prove the origin of their ore lot by lot.



The scheme described in the indictment

The Federal Police investigation ran from April 2022 to April 2026 and examined the extraction of cassiterite and gold in the Pupunha region, in the Mucajaí river basin, inside the Yanomami Indigenous Land, between March 2021 and December 2022. According to the indictment, accepted by the court on 17 August 2026, the ore was flown out from clandestine airstrips, recorded by a cooperative as the production of its members and sold to a smelter in the state of Rondônia, which turned it into tin ingots. Six individuals and four legal entities have been charged.

THE CHAIN DESCRIBED IN THE INDICTMENT



According to the indictment, the seized accounting records show 525 tonnes of cassiterite handled between May and August 2021 alone. A Federal Police analysis report indicates that the cooperative’s account received R\$ 174.3 million in credits between 22 February and 22 July of that year, of which R\$ 166.3 million (about US\$ 33 million) came from the smelter. The prosecution also alleges that the cooperative’s branch in Roraima had no actual members and no registered employees and paid no mining royalty in the state, and that satellite images showed no sign of mining in the areas covered by its titles.

525 t of cassiterite handled in four months of 2021	R\$ 166.3 m transferred by the smelter to the cooperative in five months	R\$ 174.3 m total credits in the cooperative’s account in the same period
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Seen from the buyer’s side, nothing looked irregular, since the ingots carried international industry certifications, the tax documents were formally in order and the product was sold in Brazil and abroad, including, according to press reports, to buyers in the United States. According to information provided by the smelter itself, the cooperative remained its main supplier in 2022, 2023 and 2024, delivering 12,488 tonnes of cassiterite, about half of everything the smelter bought in the period.



CASSITERITE SUPPLIED BY THE COOPERATIVE TO THE SMELTER FROM 2022 TO 2024 (tonnes)



Source: information provided by the smelter itself in a civil inquiry. With all the cooperative’s branches included, the three-year total is 12,488 tonnes.

Three actions on the same facts

The response was organized as three actions on the same facts, each with its own function. The table below sets out the subject matter, amount and status of each, and the evidence gathered in the criminal investigation supports both civil actions.

THREE ACTIONS ON THE SAME FACTS

	Criminal case	Public civil action for reparation	Action under Law No. 12,846/2013
Case number	No. 1003352-22.2022.4.01.4200	No. 1010705-74.2026.4.01.4200	No. 1011028-79.2026.4.01.4200
Defendants	Six individuals and four legal entities	Ten defendants, individuals and legal entities	Four legal entities
Subject matter	Usurpation of federal property, environmental offences, money laundering and criminal organization, among others	Full reparation, collective moral damages and duties to verify origin	Fine, forfeiture, partial suspension of activities and ban on public incentives
Amount in dispute	Not applicable	R\$ 1,698,113,219.00	R\$ 146,006,080.44
Status	Indictment accepted by the court on 17 August 2026	Interim relief granted in part on 17 September 2026	Interim relief granted in part on 18 September 2026

The order of 17 September 2026

The reparation action was filed on 4 September 2026 and claims R\$ 1,698,113,219.00 (about US\$ 330 million). The amount comprises at least R\$ 53.1 million for the ore taken from the Union, R\$ 25 million for residual environmental damage and R\$ 1.62 billion in collective moral damages. The action also asks that the smelter and the cooperative be required to prove the origin of each lot of ore, under permanent programmes with annual independent audits and periodic reports, the smelter’s programme to be aligned with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

On 17 September 2026, the 1st Federal Civil Court of Roraima granted the interim relief in part. On a preliminary assessment, the decision noted that the commercial relationship between the smelter and the cooperative had continued after the police operation, under the same private controls that had failed to detect the



Press release on the decision (in Portuguese)



irregular origin of the ore. The court declined, for now, to order the independent audit with field verification, and it refused the conditional suspension of activities in the form requested.

With each lot acquired without proof of origin, the introduction of ore of unknown provenance into the formal market is consummated irreversibly, with the definitive dilution of its traceability in the smelting process and its conversion into an exported product.

Decision of 17 September 2026, 1st Federal Civil Court of Roraima (unofficial translation)

WHAT THE DECISION OF 17 SEPTEMBER 2026 ORDERED

- For the smelter, a ban on acquiring, receiving, recording or selling cassiterite without a tax document that identifies the ANM mining file, the title in force and the environmental licence and, in the case of cooperatives, the producing member and the titled area.
- Lot-by-lot verification of the purchases made from the defendant cooperative and submission, within 30 days, of the list of purchases since 1 January 2021.
- For the cooperative, a ban on receiving or selling ore from non-members or from areas without a title and a licence, together with delivery of the list of members, titles, annual mining reports and royalty payment receipts.
- For both companies, appointment of a compliance officer within 30 days, implementation of a verification protocol and of individualized records within 60 days, and reports to the court and to the Federal Prosecution Service every 90 days.
- A fine of R\$ 50,000 per day of non-compliance and of R\$ 20,000 per day of delay in the reports, capped for now at R\$ 5 million per defendant.

Liability of the companies

The second public civil action, filed on 14 September 2026, relies on Law No. 12,846/2013, known as the Anti-Corruption Act, under which legal entities are strictly liable for acts against the public administration. The complaint attributes to the smelter the financing of the unlawful activity, the use of an intermediary to conceal the real interests involved and the obstruction of oversight, to the cooperative the last two of those acts, and to the other two companies financing and obstruction. It asks for fines of 10% to 12% of gross revenue, forfeiture of the amounts obtained, partial suspension of activities and a ban on public incentives. On 18 September 2026 the court ordered a freeze on the assets of the four defendants up to a total of R\$ 146,006,080.44 (about US\$ 29 million), to be enforced gradually and without interrupting lawful activities, and left the remaining sanctions for the judgment on the merits. All three cases are pending, and the defendants are presumed innocent until a final decision.



6

Findings and areas for cooperation

The two cases come from opposite ends of the chain, a driver stopped on a highway and a smelter selling certified ingots. Both expose the same weakness in the way origin is currently established, and both indicate where cooperation between countries would be most useful.

What the cases show

In both cases the documents said little about where the ore came from. The gold travelled with no papers at all, and the cassiterite with invoices, mining titles and certifications that were formally valid. In the first case the nature of the gold was established by forensic analysis, and in the second the prosecution's case on origin rests on cross-checking accounting records, bank data and satellite imagery.

It follows that verification needs to reach the physical product and the data behind the documents, and to take place earlier. Forensic comparison is at present applied after a seizure. Applied at the first sale, at the smelter or refinery and at the border, it could test the declared origin before the metal is mixed and exported, which requires a much larger database of reference samples.

The second case also shows what civil litigation adds to prosecution. A criminal conviction punishes past conduct under a high standard of proof, whereas a civil order can change the way a business operates from then on, by requiring it to verify its suppliers under court supervision. In environmental matters, civil liability is strict and the burden of proof may be shifted, and the same body of evidence serves both proceedings.

Areas for cooperation

Reference samples

Sharing of reference samples and laboratory results between producing regions and across borders, so that forensic analysis can indicate the mining area and the country of origin.

Channels between prosecutors

Faster formal channels between prosecution services, through mutual legal assistance and prosecutor networks that allow information to be passed on spontaneously.

Tin and other minerals

Inclusion of cassiterite, tin and other minerals in the traceability agenda alongside gold, with lot identification and geochemical reference data.



Red flags found in the case files

For companies that buy minerals and for the authorities of importing countries, the case files point to red flags that due diligence based on documents alone tends to miss. The list below draws on the facts alleged in Operation Forja de Hefesto and on the permits examined in the structural action described in chapter 3.

RED FLAGS

- A supplier with no registered employees, no actual members and no visible mining operation.
- Volumes that exceed what the declared area could plausibly produce.
- A cooperative as first seller, without identification of the producing member and of the titled area.
- Payments out of proportion to the size of the supplier.
- Titled areas with no sign of extraction in satellite imagery.

Several of these red flags can be checked against public data, such as mining title registries and satellite imagery. From the authorities of importing countries, the most useful contributions are customs and import data, information on beneficial ownership and timely answers to requests for mutual legal assistance.

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Illegal mining and mineral traceability in the Brazilian Amazon

**The Federal Prosecution Service, the legal framework and two recent
cases**

Federal Prosecution Service of Brazil · Offices specialized in illegal mining

Organized by the office of federal prosecutor André Luiz Porreca Ferreira Cunha. This edition closed on
7 October 2026.

The cases described are pending, unless otherwise indicated, and the defendants are presumed innocent
until a final decision.

Photographs: Federal Prosecution Service archive.