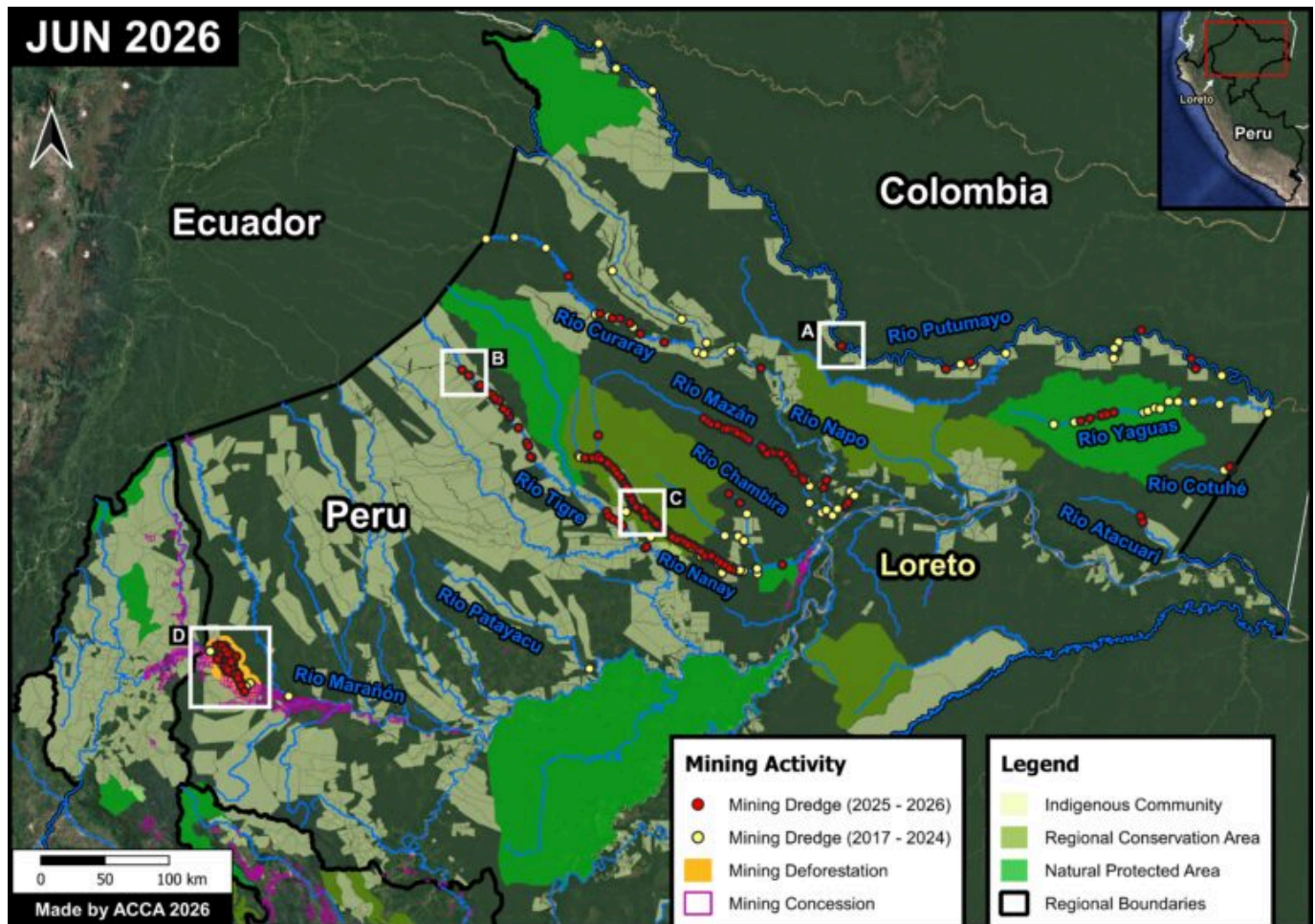


MAAP #247: River gold mining expansion in the northern Peruvian Amazon (Loreto region)

August 16, 2026



Base Map. Gold mining activity in Loreto, Peru. Data: ACCA, FAP, FEMA, FZS, GGF, IBC, SERNANP.

Gold mining has been expanding in recent years across various regions of the **Peruvian Amazon**.

Previous reports (for example, see MAAP #241 (<https://www.maaprogram.org/mining-peru-tambopata/>)) have shown the rapid expansion of gold mining deforestation in the southern Peruvian Amazon, particularly in the Madre de Dios region.

Our reporting has also indicated that gold mining continues to expand into other Amazonian regions (see MAAP #233 (<https://www.maaprogram.org/gold-mining-peru-amazon/>)), notably the **Loreto region** in the **northern Peruvian Amazon** (see **Base Map**).

Loreto is one of the Amazonian regions most affected by **river-based mining** activity. Mining dredges are a direct source of river contamination due to the substances used in the gold extraction process, most notably mercury.

During our active monitoring period from 2017 to 2026, we have detected or otherwise documented over **1,500 mining dredges** in the Amazonian rivers of the Loreto region (based on our detections from very-high-resolution satellite imagery and reports from other institutions, see Annex for details).

In fact, we have identified a **major increase** in the number of recorded mining dredges during the most recent 2025 to 2026 period, including expansion to new rivers across Loreto.

Over just these past two years (2025–2026), we have identified over **700 mining dredges** in the rivers of Loreto, representing nearly half (46%) of the total going back to 2017.

Furthermore, we have now documented the presence of mining dredges in **13 rivers** in Loreto: Atacuari, Chambira, Cotuhe, Curaray, Marañón, Mazan, Nanay, Napo, Patayacu, Pintuyacu, Putumayo, Tigre, and Yaguas. Of these, the rivers most affected by dredge-based mining activity are the **Nanay, Marañón, Tigre, and Mazán**.

Below, we present **four case studies** (see Base Map, Insets A–D) that illustrate the current gold mining situation in the Amazonian rivers of the Loreto region. These case studies document mining activity during the years 2025–2026 and feature high-resolution satellite imagery.

Case Studies

A. Putumayo River

Illegal gold mining activity has spread across various sections of the Putumayo River, which forms part of the **Peru-Colombia border** in the Loreto region. Between 2020 and 2026, we recorded a total of 29 mining dredges along the Putumayo River. Of these records, 58% (17 dredges) date from 2025–2026 (**Figure A**), highlighting the increase in illegal gold mining activity in recent years.

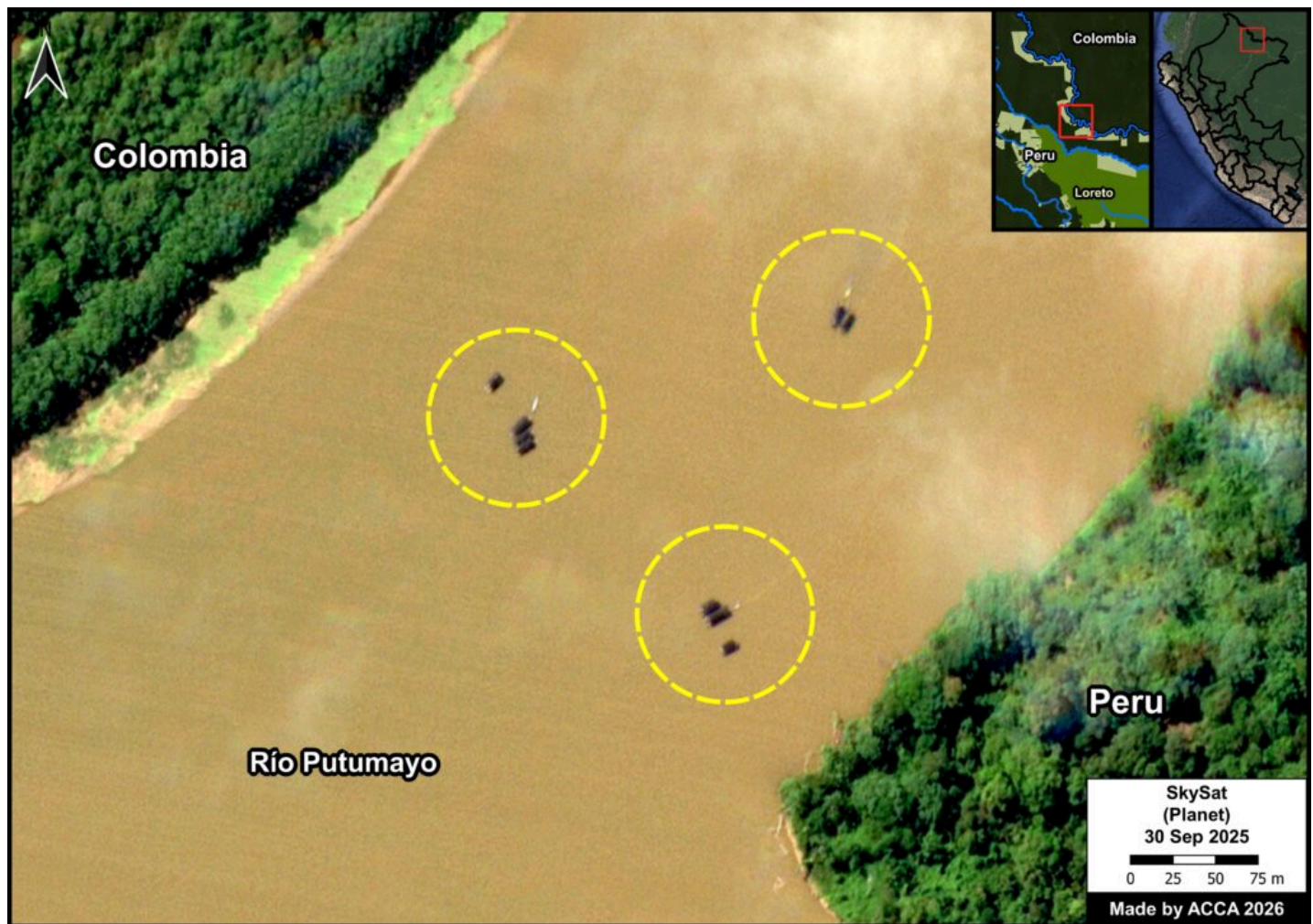


Figure A. Mining dredges located on the Putumayo River. Data: ACCA, Planet.

B. Tigre River

We have recorded illegal gold mining in various sections of the Tigre River, an Amazonian river spanning over 550 km across the Loreto region. Between 2021 and 2026, a total of 73 mining dredges were recorded along the Tigre River, making it the river with the third-highest number of historical dredge records in the region. In recent years (2025–2026), 67 mining dredges were recorded along the Tigre River, representing 91% of the total records for this river.

This situation demonstrates a major increase in illegal mining activity on the Tigre River, which has included gold extraction near the riverbanks (**Figure B1**), as well as the presence of mining dredges near populated areas (**Figure B2**).

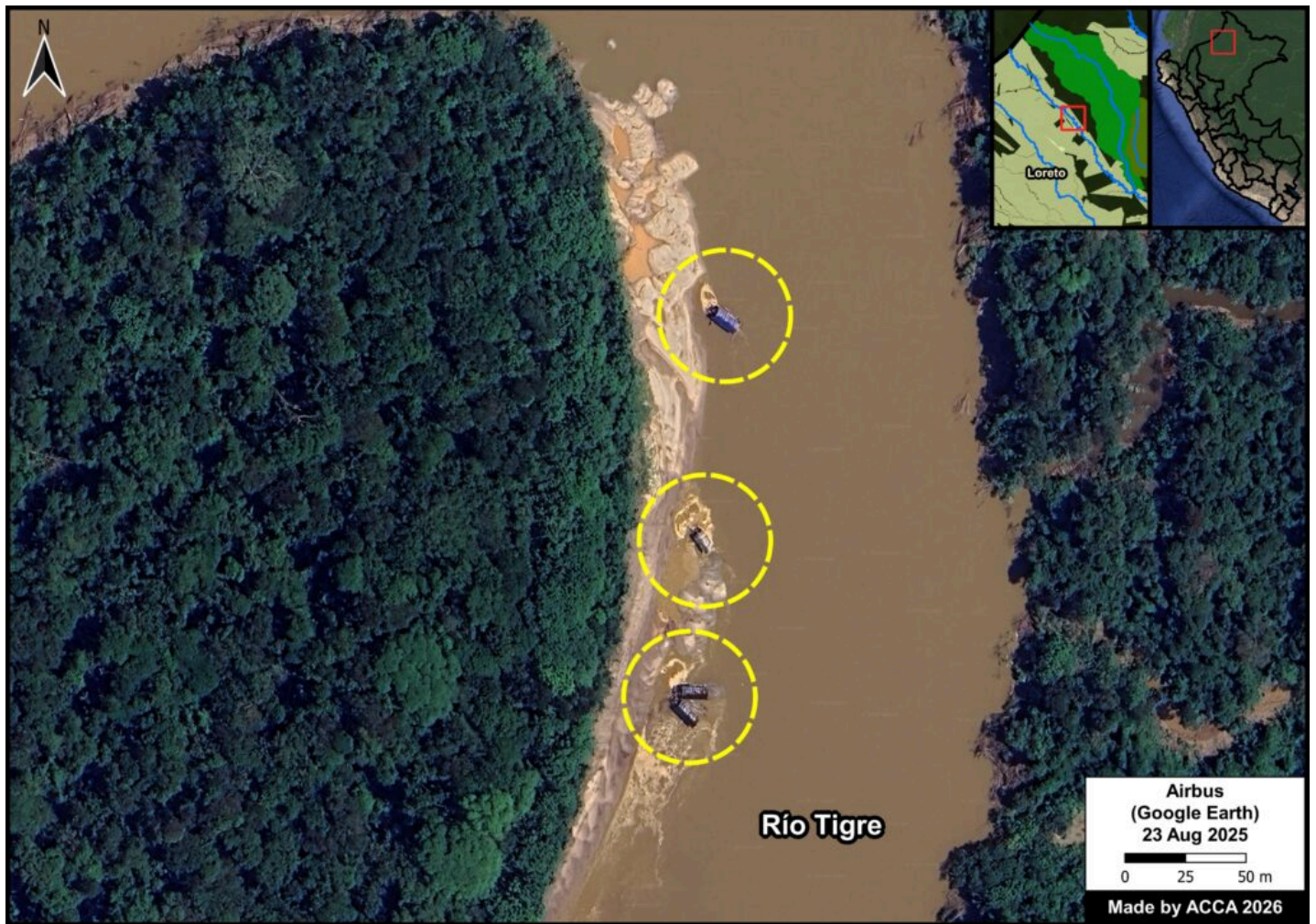


Figure B1. Mining dredges located on the Tigré River. Data: ACCA, Google Earth.



Figure B2. Mining dredges located near a settlement on the Tigre River. Data: ACCA, Google Earth.

C. Nanay River

Gold mining activity on the Nanay River has expanded since 2021—when we first recorded gold mining dredges—a trend described in previous reports (see MAAP #187 (<https://www.maaprogram.org/es/mineria-loreto-peru/>)). The Nanay River is the Amazonian river **most impacted by illegal mining** in the Loreto region, as it accounts for the highest number of historical records of mining dredges. Between 2021 and 2026, a total of 1,076 mining dredges were recorded along various sections of the river.

During the 2025–2026 period, we documented the presence of 421 mining dredges on the Nanay River, demonstrating a steady increase in this mining activity compared to previous years (301 records in 2024, 221 records in 2023). Furthermore, mining dredges have been recorded in new sections of the Nanay River, highlighting the expansion of this mining activity and its impact along the river (**Figure C1**).

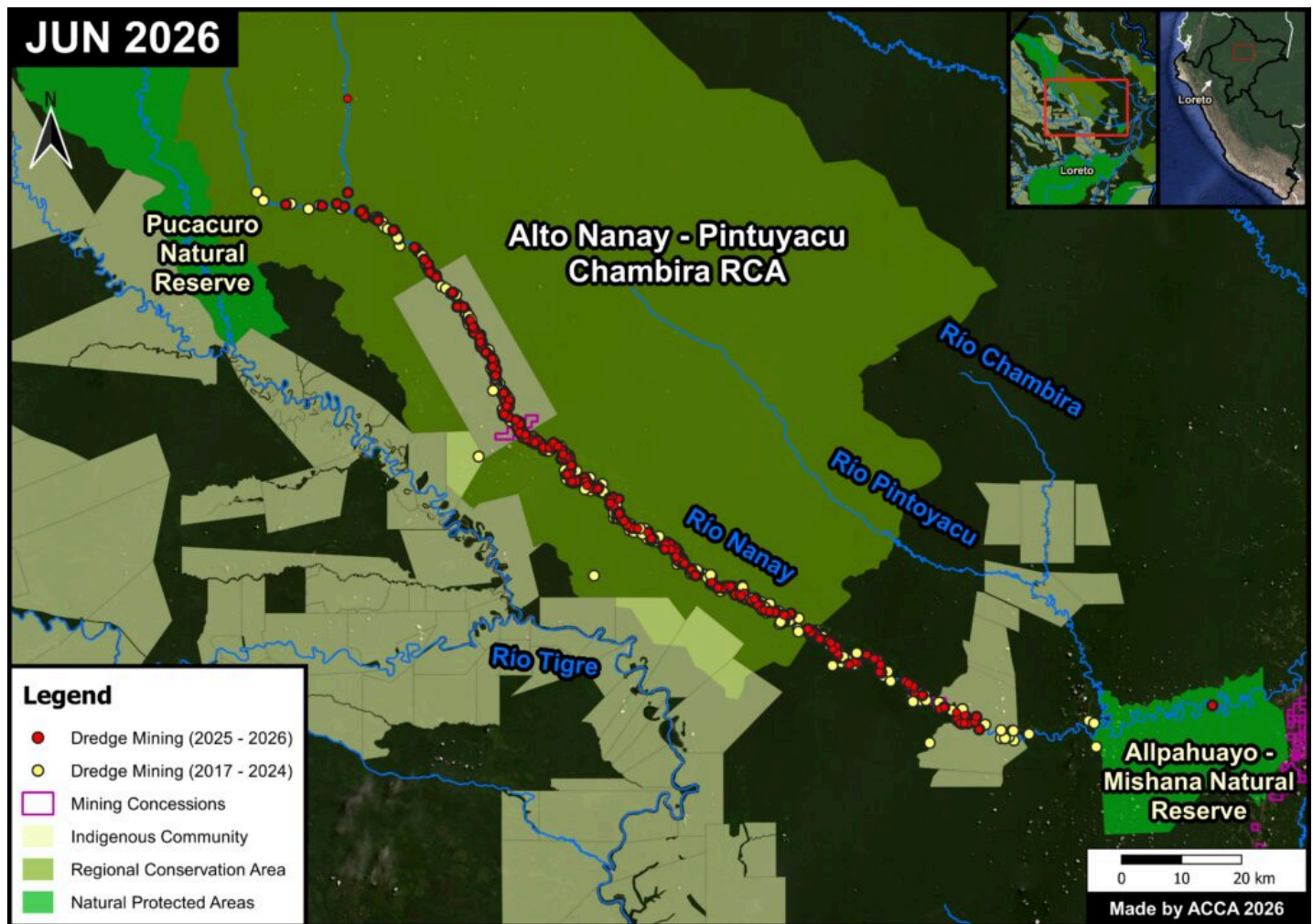


Figure C1. Record of mining dredges on the Nanay River for the years 2021–2026. Data: ACCA, Planet.

Furthermore, gold mining has begun to directly impact ecosystems adjacent to the Nanay River, with mining activity concentrated in areas comprising palm swamps, low-hill forests, and seasonally flooded alluvial forests. Between 2025 and 2026, we **identified mining deforestation** along the banks of the Nanay River (**Figure C2**).



Figure C2. Loss of forest cover due to mining dredging activity in the Nanay River. Data: ACCA, Plane

D. Marañón River

Illegal gold mining activity has continued to expand along the Marañón River, particularly in the Manseriche District of Datem del Marañón Province (**Figure D1**). In this area, gold mining operations have expanded into various zones adjacent to the river. That is, we have identified **gold mining deforestation** (associated with the construction of mining pits and infrastructure) along with the presence of mining dredges in the Marañón River, which represents a major escalation in terms of impact.

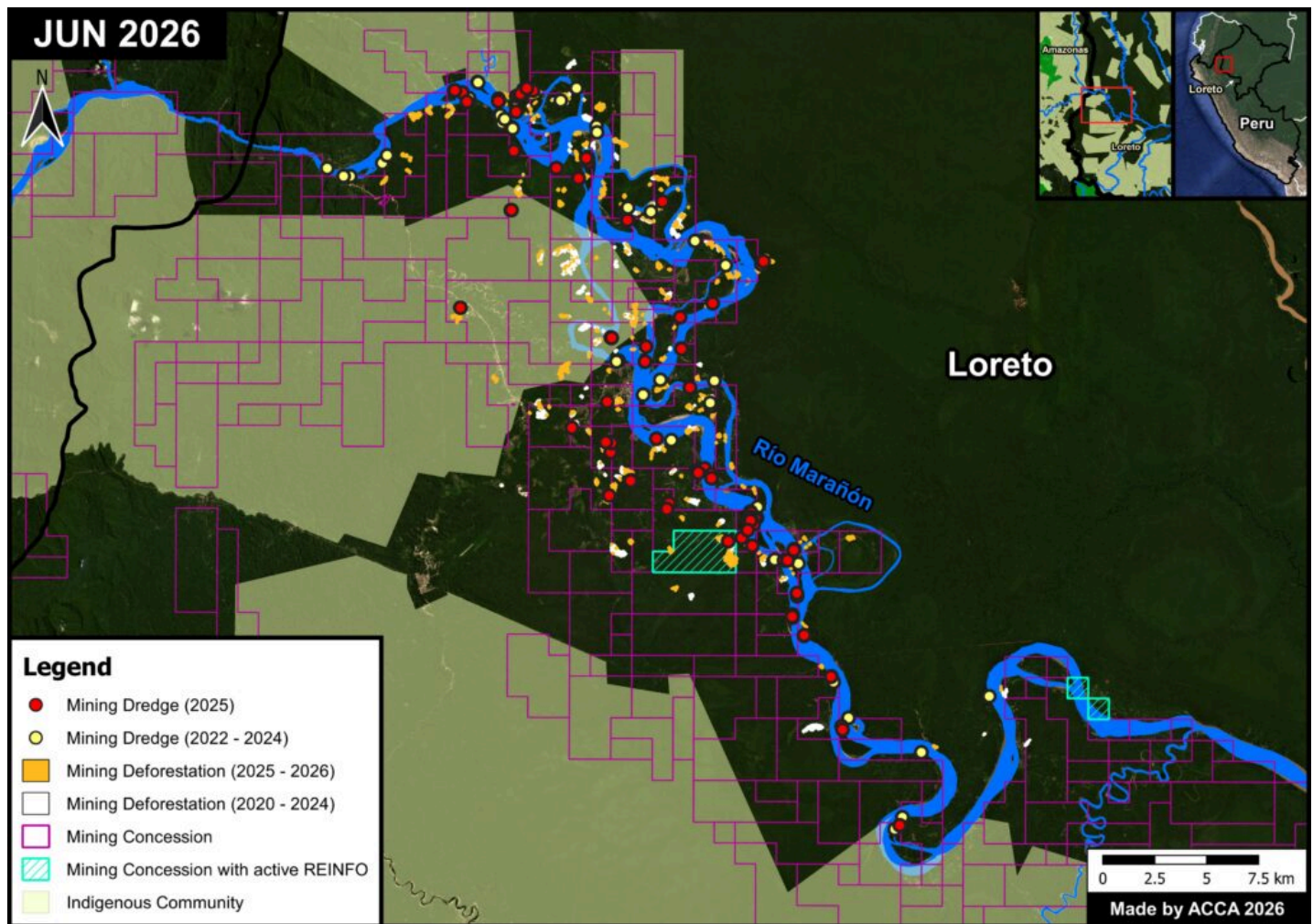
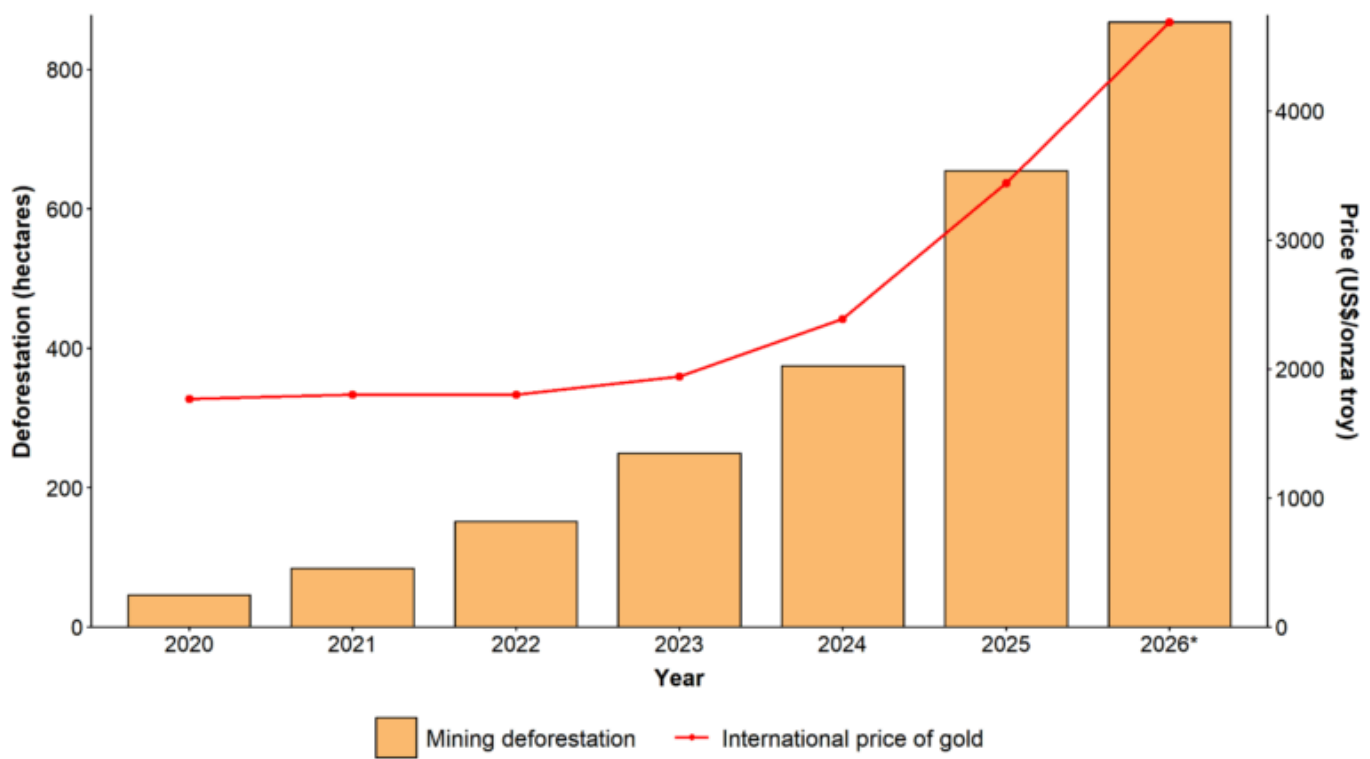


Figure D1. Gold mining activity on the Marañón River. Data: ACCA, FEMA, Planet.

As of June 2026, we identified **241 mining concessions** in the Manseriche district according to the mining cadastre of the relevant Peruvian mining agency (INGEMMET); these include concessions that are titled (122), pending (115), extinguished (2), and other (2). As shown in **Figure D1**, these concessions are distributed along the Marañón River and in areas adjacent to it, reflecting an increase in mining concession applications in recent years.

On the other hand, we identified only 9 registrations in the Comprehensive Mining Formalization Registry (REINFO) for the Manseriche district. Upon verifying the mining rights associated with these nine registrations, only three are linked to mining concessions located within the district, while the other six involve mining rights that do not exist in the INGEMMET mining cadastre. Furthermore, mining activity has been recorded for only one concession associated with a REINFO registration (Golden Rose 4 mining concession).

Graph 1 shows **annual gold mining deforestation** in the Manseriche district for the 2020–2026 period (up to June 2026).



Graph 1. Mining-related deforestation (Manseriche) and gold price (through June 2026). Data: ACCA, BCRP.

During this period, note that annual mining deforestation has steadily increased from 2020 to 2024, coinciding with the rise of international gold prices.

Starting in 2025, we documented a major increase in mining deforestation, with more than 600 hectares impacted that year.

This rise in mining deforestation correlates with the rise in the international price of gold in 2025.

Likewise, a high number of mining concession applications were identified for the Manseriche district for that same year, with 109 new concessions recorded across various sectors of the district.

By 2026, cumulative gold mining deforestation in the Manseriche district of Loreto reached **868 hectares** (Graph 1).

Between 2025 and 2026, we identified new mining deforestation in various sectors of the district, totaling 493 hectares during this two-year period (54% of the cumulative total back to 2020). **Figure D2** shows the expansion of mining areas in one sector of the district, where forest loss has been recorded along the banks of the Marañón River.



Figure D2. Mining deforestation in the Marañón River. Data: ACCA, Planet

The gold mining deforestation has occurred in areas adjacent to the Marañón River (within a zone extending up to 6 km from the river) where we have identified mining pits and infrastructure (such as camps and dredges). **Figure D3** illustrates mining sites located both on land and along the banks of the Marañón River, showing sediment accumulation in mining pits resulting from gold extraction using dredges.



Figure D3. Mining-related deforestation in areas adjacent to the Marañón River. Data: ACCA, Planet.

At the same time, the presence of illegal gold mining dredges has expanded along the Marañón River between 2022 and 2025. We identified 187 mining dredges on the river and in adjacent mining pools. By 2025, we recorded 108 mining dredges across various sectors of the Marañón River, representing 57% of the cumulative count. In certain sectors, we have observed sediment accumulation near the mining dredges, providing evidence of their extraction activities within the Marañón River (**Figure D4**).



Figure D4. Mining dredges identified on the Marañón River. Data: ACCA, Planet.

Public policies addressing the expansion of illegal mining in Loreto: Progress, limitations, and challenges

The findings of this report demonstrate that **illegal gold mining continues to expand in the Loreto region**—particularly along the **Nanay, Marañón, Tigre, and Putumayo Rivers** and other Amazonian tributaries—despite the explicit **ban on dredges** and similar equipment for mining in bodies of water (established by Legislative Decree No. 1100, which regulates the interdiction of illegal mining). Consequently, the expansion of this activity is **not due to a regulatory gap, but rather the Peruvian government's difficulties in effectively enforcing an existing prohibition**.

In alignment with the national regulatory framework, the **Regional Government of Loreto (GOREL)** has, for over two decades, promoted a set of regulations aimed at conserving Amazonian ecosystems, protecting water resources, and preventing activities incompatible with these objectives, such as illegal mining. In this context, it has approved various ordinances designed to strengthen the

management and protection of the department's river basins. Notable among these is a Regional Ordinance (Number 001-2025-GRL-CR), which reaffirms the importance of **conserving and protecting priority river basin headwaters** to ensure access to water for meeting the population's basic needs and to promote the sustainability of regional ecosystems. These measures reflect a sustained **regional policy aimed at protecting Amazonian rivers** and recognizing their strategic importance for water security, biodiversity conservation, and the well-being of local communities.

The existence of this regulatory framework, however, has not been sufficient to curb the **expansion of illegal mining in Loreto**. In recent years, this activity has spread beyond specific hotspots to progressively **encompass new Amazonian rivers and basins**, driven by a **combination of structural factors**. Key among these are the limited state presence, the difficulty of exercising control over a territory defined by an extensive river network, the operations of criminal organizations, and the high profitability of gold. Compounding this situation are poverty, limited public investment, and a lack of sustainable economic alternatives for Amazonian populations; for them, illegal mining often represents the sole source of income—or one that is far more lucrative than traditional productive activities.

As a recent study points out (Shadow Gold: The Expansion of Illegal Mining and Its Effects on the Nanay River Basin, with a Focus on Women), this activity not only causes severe **environmental impacts** but also transforms local economies, strengthens **illicit economies**, and weakens territorial governance.

Peruvian Government response

The State's response to the spread of illegal mining in Loreto has focused primarily on **interdiction actions, joint operations, the destruction of dredges, and prosecutorial investigations** aimed at reducing the operational capacity of organizations engaged in this activity.

Within this context, the competent authorities have carried out various **operations** in the main affected areas. One of the most recent cases involves interventions on the Tigre River, where authorities destroyed dredges after confirming a significant increase in extraction activity.

Our satellite monitoring, however, reveals that **illegal mining quickly reappears** in areas where interventions have taken place, demonstrating that while interdiction efforts are a necessary control tool, their effects tend to be temporary unless **complemented by additional strategies** aimed at dismantling the criminal networks, financial flows, and supply chains that sustain this illicit economy.

In addition to enforcement actions, the State has adopted **preventive measures** to curb the expansion of illegal mining in areas of high environmental importance. In the Nanay River basin, for instance, the acceptance of new applications and the granting of mining concessions were suspended (Note 1), and states of emergency were declared due to the contamination of the primary water supply source for the city of Iquitos. These measures represent significant progress; however, their effectiveness depends on continuous oversight and a sustained institutional presence in the area.

In terms of national policy, Supreme Decree No. 003-2025-IN—which approves the **National Strategy for the Reduction and Interdiction of Illegal Mining through 2030**—recognizes the need to strengthen intelligence, inter-agency coordination, and the prosecution of criminal economies linked to illegal mining, while promoting an approach that goes beyond interdiction actions.

Limitations of the state response

Despite the advances noted above, the state's response continues to face major **structural limitations**. First, Loreto presents immense logistical challenges due to its **vast territory** and the dispersed nature of its river network. Many of the affected areas are accessible only by river—often requiring hours or even days of travel—which drives up operational costs and makes it difficult for authorities to maintain a permanent presence.

This geographical complexity takes on a critical **transnational dimension in border basins** such as the Putumayo or the Tigre. The vulnerability of the **borders with Colombia, Brazil, and Ecuador** enables criminal organizations to operate with cross-border mobility—transporting illicit inputs like mercury or crossing international boundaries to evade interdiction efforts by Peruvian law enforcement—thereby highlighting the inadequacy of approaches limited solely to the local or national level.

Secondly, the institutional response remains predominantly **reactive**. Although interdiction efforts temporarily reduce the infrastructure used for illegal mining, there has been less progress in investigating financing chains, gold marketing, money laundering, and the supply of fuel, mercury, and machinery—factors that facilitate the **rapid resumption** of this activity.

Furthermore, weaknesses persist in the coordination among the entities responsible for control, oversight, and criminal prosecution. **Limited coordination** regarding information sharing, joint planning, and the monitoring of interventions—involving the National Government, Regional Governments, the

Specialized Environmental Prosecutor's Offices (FEMA), and the Directorate of Captaincies and Coast Guard (DICAPI)—reduces the effectiveness of the state's response to highly adaptable organizations.

Another important limitation concerns inconsistencies in the granting and administration of **mining rights** in the region. Despite the ban on alluvial mining using dredges in water bodies, **mining concessions** have been identified in Loreto with boundaries that encompass rivers, streams, or other bodies of water, as well as concessions granted in areas where the expansion of illegal mining has been documented. While a mining concession does not in itself authorize the commencement of extraction activities—nor does its granting imply approval of environmental instruments or other necessary permits—this situation reveals weaknesses in land-use planning and in the coordination between the entities responsible for managing mining rights and those charged with protecting the environment and water resources. This creates conflicts regarding land management, increases pressure on sensitive ecosystems, and hinders efforts to prevent and control illegal mining.

Compounding this situation are the protracted nature of **mining formalization processes** and the repeated extensions of the Comprehensive Mining Formalization Registry (REINFO). In the Amazonian context, REINFO has created significant distortions; illegal operators frequently exploit it fraudulently as a “shield of impunity” to temporarily halt prosecutorial and interdiction actions, thereby subverting the purpose of a registry designed for small-scale and artisanal mining and using it instead to mask alluvial mining in water bodies—an activity that is strictly prohibited without exception.

Local responses

Given these limitations in the central government's response, the coordination of **local stakeholders** emerges as a fundamental component in the fight against illegal mining. In Loreto, mechanisms for technical and social coordination—such as the Good Governance Platform for the Nanay River's Payment for Ecosystem Services (PES) scheme and the Technical Group Against Illegal Mining—have been strengthened; these initiatives foster genuine collaboration among public entities, Indigenous organizations, civil society, and international cooperation partners.

Within this network, **Indigenous organizations and local communities** also play a fundamental role through community-based surveillance, territorial monitoring, and the issuance of early warnings regarding the spread of illegal mining. These initiatives complement state actions and demonstrate that strengthening territorial governance is an essential component for improving the effectiveness of public policies addressing illegal mining.

Those carrying out these monitoring activities, however, face a situation of particular **vulnerability**. In various river basins in Loreto—particularly the Nanay and Putumayo—leaders, community monitors (Note 2), and even park rangers have been subjected to threats and intimidation as a result of their efforts to report the spread of illegal mining and protect water resources. This situation demonstrates that the state’s response must not only strengthen oversight and interdiction capabilities but also guarantee adequate protection for those who contribute to defending the territory and ensuring compliance with environmental regulations. The persistence of these risks undermines territorial governance and limits community participation in the prevention and control of illegal mining.

Conclusions

The evidence presented above confirms that the **expansion of illegal mining in Loreto is not due to the absence of a regulatory framework, but rather to limitations in effectively implementing existing public policies**. Although the State has strengthened interdiction efforts and developed regulatory instruments to protect Amazonian river basins, these measures remain insufficient against criminal organizations possessing a high capacity for logistical, financial, and cross-border adaptation.

Consequently, a **more effective response requires moving beyond the reactive and short-term approach to river-based controls**. These actions must be complemented by strengthening financial and criminal intelligence targeting money laundering networks, strictly monitoring irregularities in formalization registries, effectively protecting human rights defenders, coordinating bilaterally in border areas, and designing viable, sustainable socioeconomic alternatives for local populations. Only through a comprehensive, decentralized approach—combining prevention, strategic criminal prosecution, territorial development, and the strengthening of community governance—will it be possible to sustainably curb and reduce the expansion of illegal mining in the Peruvian Amazon.

Methodology

The identification of mining dredges was based on the **visual interpretation of very-high-resolution satellite imagery** available on the Planet, Maxar, and Google Earth Pro platforms for Amazonian rivers in the Loreto region. Additionally, confidential reports and direct communications from various institutions regarding the presence of mining dredges in Amazonian rivers were incorporated. This information enabled the recording of mining dredges in new areas and the prioritization of monitoring—using very-high-resolution satellite imagery—in strategic sectors of the Loreto region.

The identification of deforestation caused by gold mining was based on the visual interpretation of high- and very-high-resolution satellite imagery available on the Planet, Maxar, and Google Earth Pro platforms for the Loreto region. Following this identification, deforestation was monitored using Planet NICFI monthly mosaics (4.7 m spatial resolution) to track the expansion of mining-related deforestation and identify new affected areas within the Loreto region.

Notes

1. Supreme Decree N°022-2024-EM, Extension of the suspension of the admission of mining petitions in the area of the Nanay River, located in the district of Alto Nanay, province of Maynas, department of Loreto
 2. Members of local monitoring organizations recognized by the Loreto Regional Government and members of community monitoring committees recognized by SERNANP.
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Annexes

Annex 1. Registry of mining dredges by river in the Loreto region for the periods 2017–2024 and 2025–2026 (through June)

River	Mining Dredge Register	
	Period 2017 - 2024	Period 2025 - 2026*
Atacuari	-	5
Chambira	2	2
Cotuhe	8	1
Curaray	8	7
Marañon	79	108
Mazan	9	63
Nanay	655	421
Napo	14	5
Patayacu	1	-
Pintuyacu	5	-
Putumayo	12	17
Tigre	6	67
Yaguas	15	8
Total	814	704

Annex 2. Registry of mining dredges in the Loreto region for the period 2017–2026 (June)

Year	Detection of mining dredges using satellite imagery		Mining dredge register compiled from reports by other institutions	
	Number of dredges	Number of satellite images analyzed	Number of dredges	Number of reports received
2017	-	-	8	1
2020	1	1	-	-
2021	16	7	-	-
2022	46	15	127	14
2023	172	58	57	26
2024	303	77	84	37
2025	477	132	78	11
2026*	113	37	36	6
Total	1128	327	390	95

Acknowledgments

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