

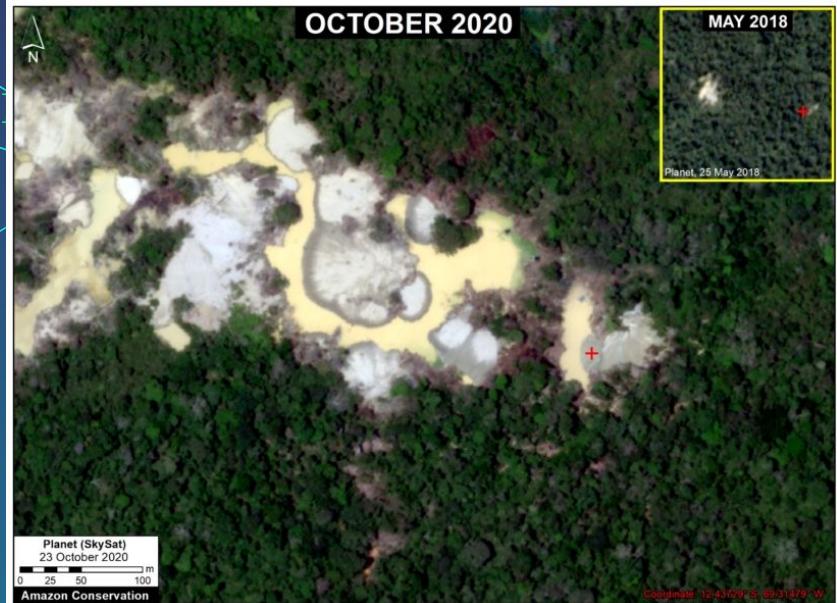
planet.

Combating Illegal Mining in the Amazon with Satellite Data

Dr. Matt Finer

Senior Research Specialist, Amazon Conservation
Director, MAAP (Monitoring of the Amazon Project)

explore21



Global
Connection

MAAP: Monitoring of the Amazon Project

- Satellite-based
- Real-time
- Amazon Monitoring
- Deforestation & Fire
Ag, Roads, Mining

Since 2015, over 140 reports



The screenshot shows the MAAP website interface. At the top left is the logo for "AMAZON CONSERVACIÓN ACCA" and "CONSERVACIÓN AMAZÓNICA". At the top right is the "ESPAÑOL" link and a search bar. The header navigation bar includes links for HOME, ARCHIVE, SECTORS, SYNTHESIS, INTERACTIVE, COUNTRIES, OTHER, and ABOUT MAAP. A red arrow points to the "GOLD MINING" link in the SECTORS menu. Below the navigation is a page header with a yellow background and a set of numbered buttons (1-6). The main content area displays five news items related to gold mining in the Peruvian Amazon, each with a thumbnail image, title, date, and a brief description. The fifth item is a map showing mining activity in the southern Peruvian Amazon.

MAAP #140: DETECTING ILLEGAL GOLD MINING IN RIVERS WITH SPECIALIZED SATELLITES
PERU, MAPS, GOLD MINING | JUL 15, 2021
Illegal gold mining is a widespread problem in the southern Peruvian Amazon (Madre de Dios region), where it has caused river contamination and the deforestation of more than 100,000 hectares. This activity has also emerged in the northern Peruvian Amazon...

MAAP #137: NEW ILLEGAL GOLD MINING HOTSPOT IN PERUVIAN AMAZON - PARIAMANU
PERU, MAPS, GOLD MINING | MAY 4, 2021
In 2019, the Peruvian government launched Operation Mercury to confront the illegal gold mining crisis in the southern Amazonian area known as La Pampa (Madre de Dios region). As a result, deforestation decreased 90% in this critical area (MAAP# 130)...

MAAP #130: ILLEGAL GOLD MINING DOWN 78% IN PERUVIAN AMAZON, BUT STILL THREATENS KEY AREAS
PERU, MAPS, GOLD MINING | DEC 1, 2020
As part of USAID's Prevent Project (dedicated to combating environmental crimes in the Amazon), we conducted an updated analysis of illegal gold mining deforestation in the southern Peruvian Amazon. In early 2019, the Peruvian government launched Operation Mercury, an unprecedented...

MAAP #121: REDUCTION OF ILLEGAL GOLD MINING IN THE PERUVIAN AMAZON
PERU, MAPS, GOLD MINING | JUN 26, 2020
Thanks to the support of the USAID, via the Prevent Project, dedicated to the prevention and combat of environmental crimes in the Amazon, we conducted a detailed analysis of recent illegal gold mining deforestation in the southern Peruvian Amazon. The...

MAAP #116: AMAZON GOLD MINING, PART 2: BRAZIL
BRAZIL, MAPS, GOLD MINING | APR 6, 2020
We present the second part of our series on Amazon gold mining, with a focus on the Brazil*. Specifically, we focus on mining in indigenous territories in the Brazilian Amazon. Extractive activities, such as gold mining, are constitutionally not permitted...

Layers

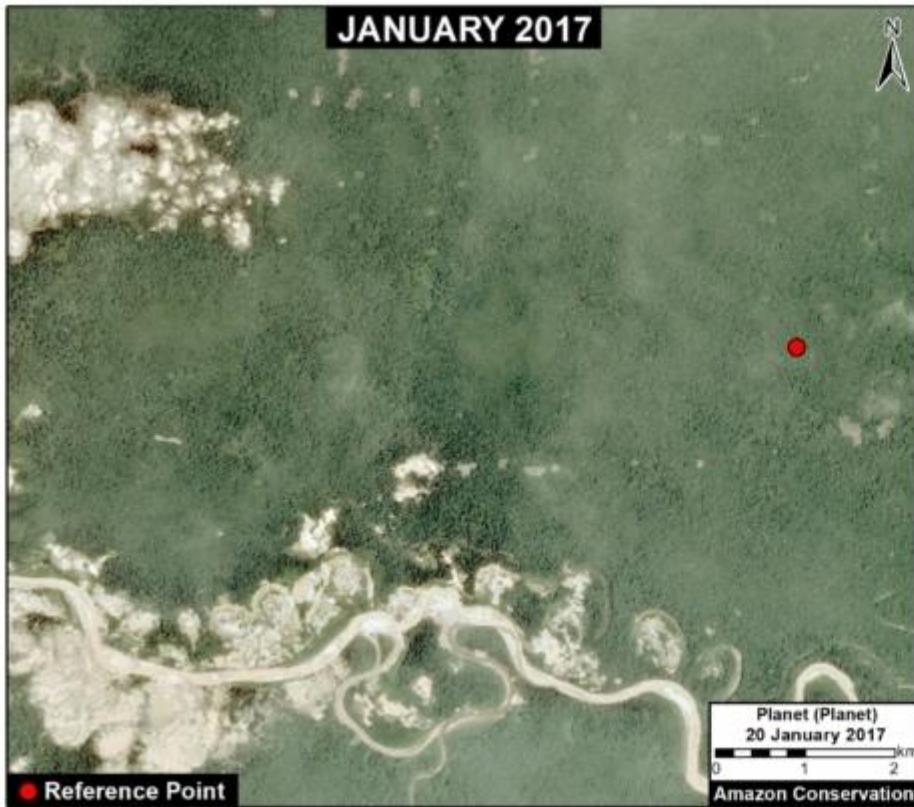
Map



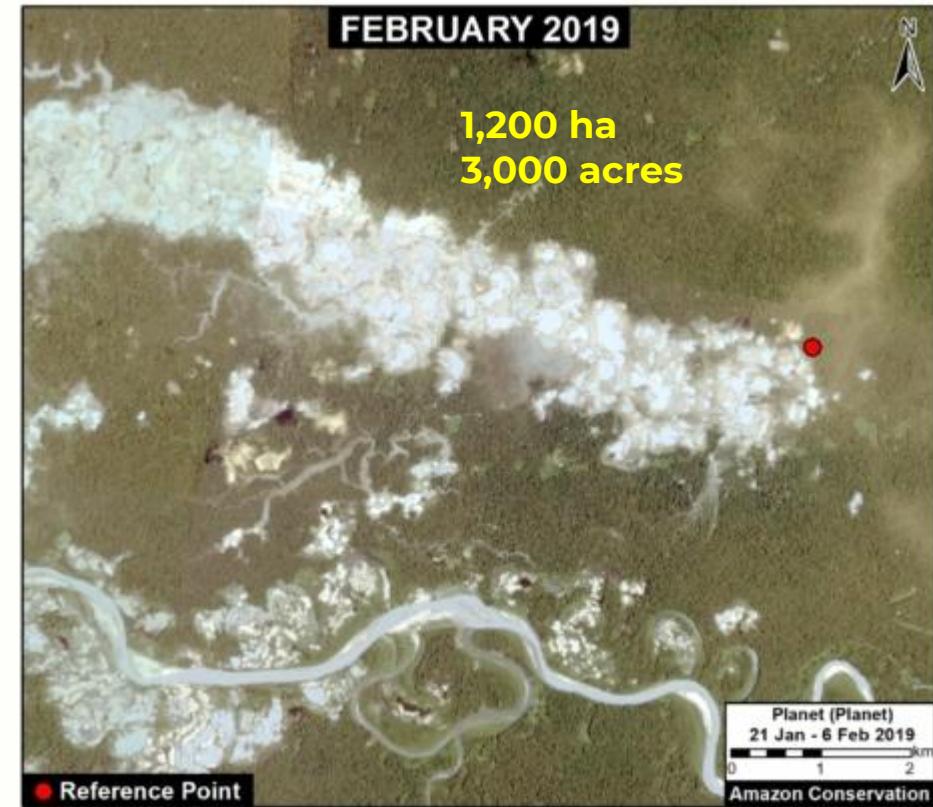
Imagery ©2021 TerraMetrics | 200 km L

Global
Connection

JANUARY 2017



FEBRUARY 2019





HOME • ARCHIVE • SECTORS • SYNTHESIS • INTERACTIVE

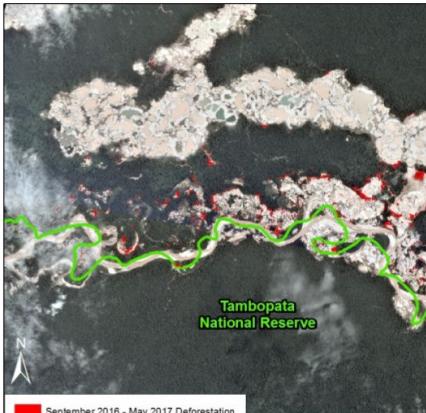
MAAP #60: GOLD MINING INCREASES IN BUFFER ZONE OF TAMBOPATA NATIONAL RESERVE

PERU, MAPS, GOLD MINING MAY 26, 2017

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In the previous MAAP #50, we presented an analysis of the extent of gold mining deforestation in the buffer zone of Tambopata National Reserve.* We document here the increase in deforestation during the last 8 months, from September 2016 to May 2017 (see red in Image 60). That brings the total to 1,100 hectares (2,700 acres).



2017



ESPAÑOL

Search...

HOME • ARCHIVE • SECTORS • SYNTHESIS • INTERACTIVE • COUNTRIES • OTHER • ABOUT MAAP

MAAP #96: GOLD MINING DEFORESTATION AT RECORD HIGH LEVELS IN SOUTHERN PERUVIAN AMAZON

PERU, MAPS, GOLD MINING JAN 8, 2019

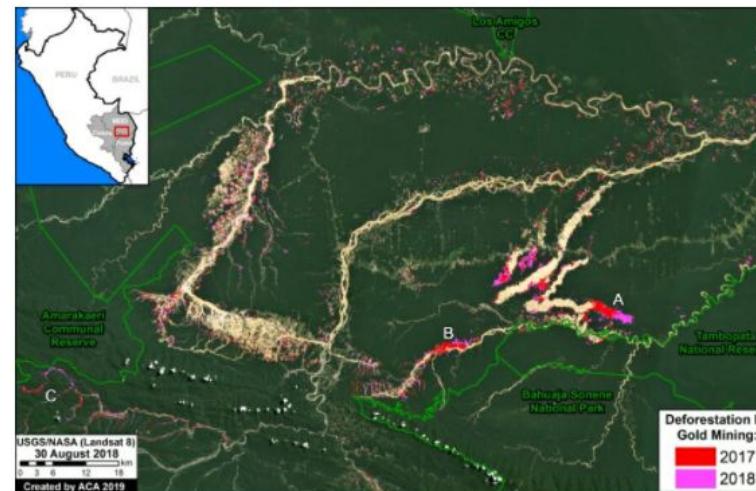
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Gold mining deforestation has been at record high levels in both 2017 and 2018 in the southern Peruvian Amazon.

Based on an analysis of nearly 500 high-resolution satellite images (from Planet and DigitalGlobe), we estimate the deforestation of 18,440 hectares across southern Peru during these last two years. That is equivalent to 45,560 acres (or 34,400 American football fields) in just two years.

The Base Map highlights this recent deforestation, with 2017 in red and 2018 in pink. The Reference Map in Annex 1 shows our full study area.



VIAN AMAZON



2018

2019

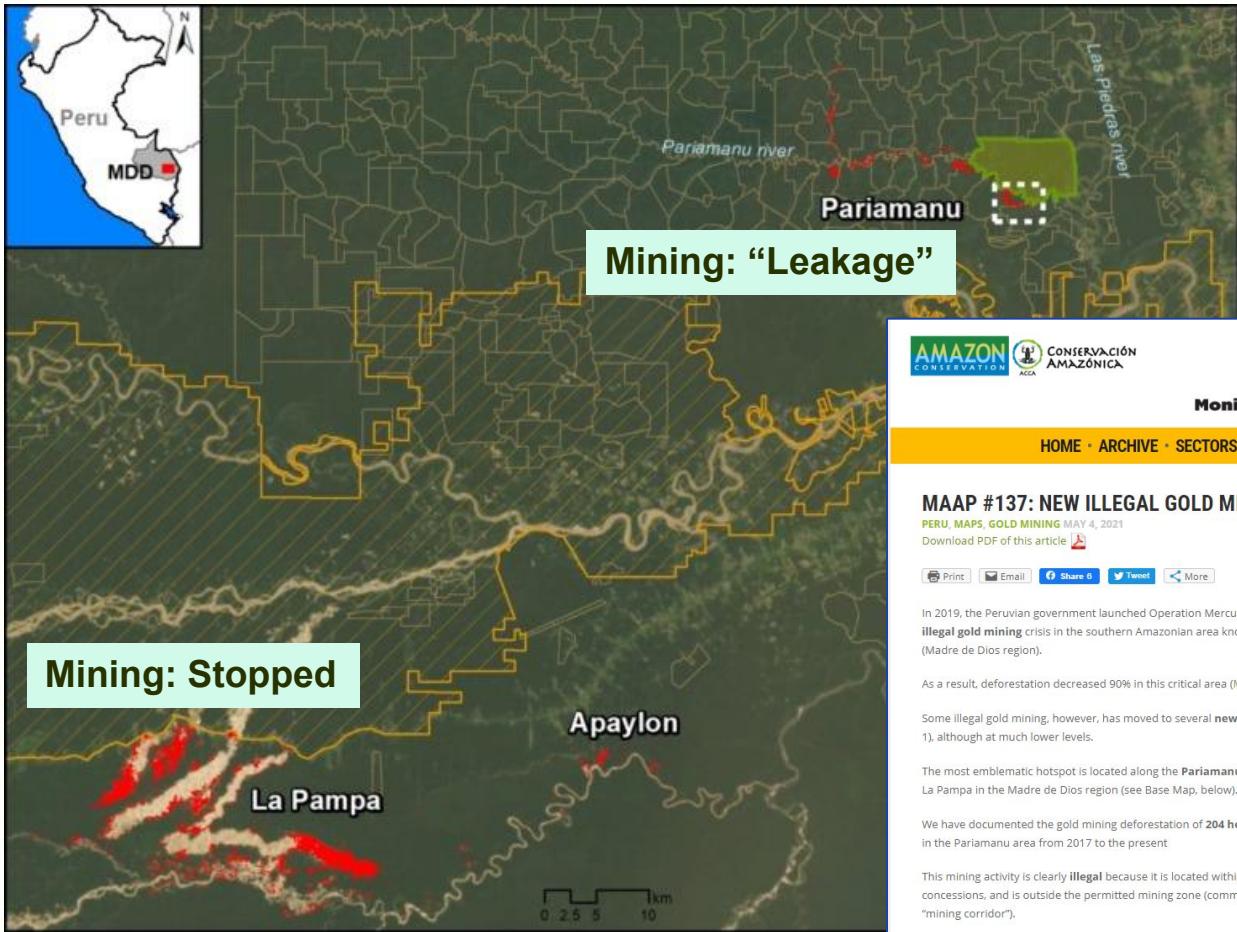


Operation Mercury – Feb 2019

FEBRUARY 2019

MAY 2020





2021

AMAZON CONSERVATION ACA **CONSERVACIÓN AMAZÓNICA** **Monitoring of the Andean Amazon Project**

[HOME](#) • [ARCHIVE](#) • [SECTORS](#) • [SYNTHESIS](#) • [INTERACTIVE](#) • [COUNTRIES](#) • [OTHER](#) • [ABOUT MAAP](#)

MAAP #137: NEW ILLEGAL GOLD MINING HOTSPOT IN PERUVIAN AMAZON – PARIAMANU

PERU, MAPS, GOLD MINING MAY 4, 2021
Download PDF of this article

In 2019, the Peruvian government launched Operation Mercury to confront the **illegal gold mining** crisis in the southern Amazonian area known as La Pampa (Madre de Dios region).

As a result, deforestation decreased 90% in this critical area (MAAP# 130).

Some illegal gold mining, however, has moved to several **new hotspots** (Image 1), although at much lower levels.

The most emblematic hotspot is located along the **Pariamanu River**, northeast of La Pampa in the Madre de Dios region (see Base Map, below).

We have documented the gold mining deforestation of **204 hectares** (504 acres) in the Pariamanu area from 2017 to the present.

This mining activity is clearly **illegal** because it is located within Brazil-nut forestry concessions, and is outside the permitted mining zone (commonly called the “mining corridor”).

Fortunately, a series of timely actions by the **Peruvian Government** has minimized the irreversible damage along the Pariamanu (see below).

The objective of this report is to present Pariamanu as an **emblematic case** that links technology with the rapid response action of public entities to address illegal activity in the Amazon.

Imagen: Planet (SkySat)
23 Octubre 2020

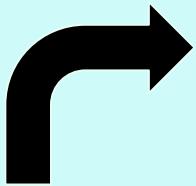
ESPAÑOL

Search...



Monitoring of the Andean Amazon Project

Linking Technology with Action

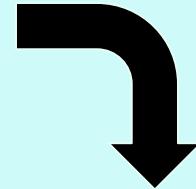


ACTION

(Policy, Admin, Legal, Operation)



Technology (Monitoring)



REPORTING

Public & Private



Technology
(MAAP
Monitoring)

Three Major Steps

1. Alerts



2. Planet Imagery



3. Tasking





Technology
(MAAP
Monitoring)



Three Major Steps

- **Satellite-based**
- **Near Real-time**
- **Automated**
- **Forest Loss**

- **Generated/Presented by:**
University of Maryland
Global Forest Watch (WRI)
Governments (Peru, Colombia)





Technology
(MAAP
Monitoring)

Three Major Steps

2. Planet Imagery



- **High-resolution (3 m)**
- **High-frequency (daily)**
- **Cloud-free mosaics (monthly)**

Peru_mining/Pariamanu zoom

X | <

Daily

Weekly

Monthly

Quarterly

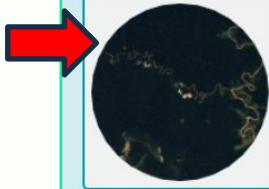
Filter

Dates

Update search

30 results

▼

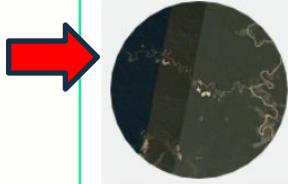


6 items

June 26, 2021

3-band PlanetScope...

3m/px 100%



10 items

June 25, 2021

3-band PlanetScope...

3m/px 100%



3 items

June 24, 2021

3-band PlanetScope...



< ● ● ● ● ● Global Connection ● ● ● ● ●

Peru_mining/Pariamanu zoom

X | <

Daily

Weekly

Monthly

Quarterly



Monthly



May 2021

global_monthly_2021_05_mosaic



April 2021

global_monthly_2021_04_mosaic

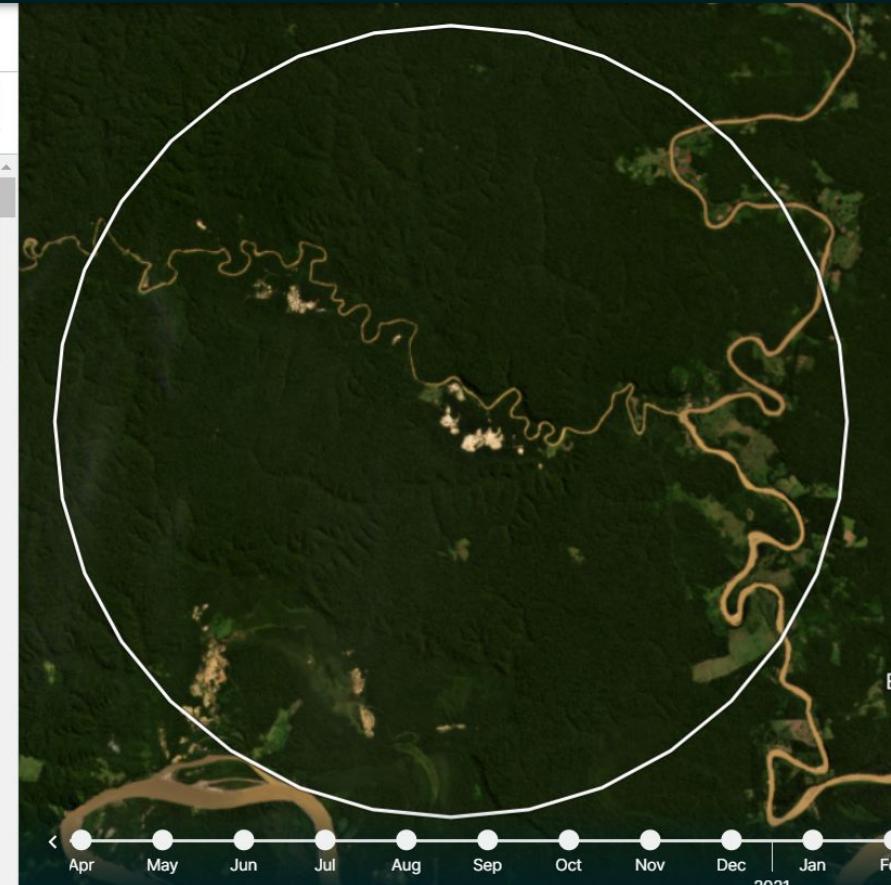


March 2021

global_monthly_2021_03_mosaic

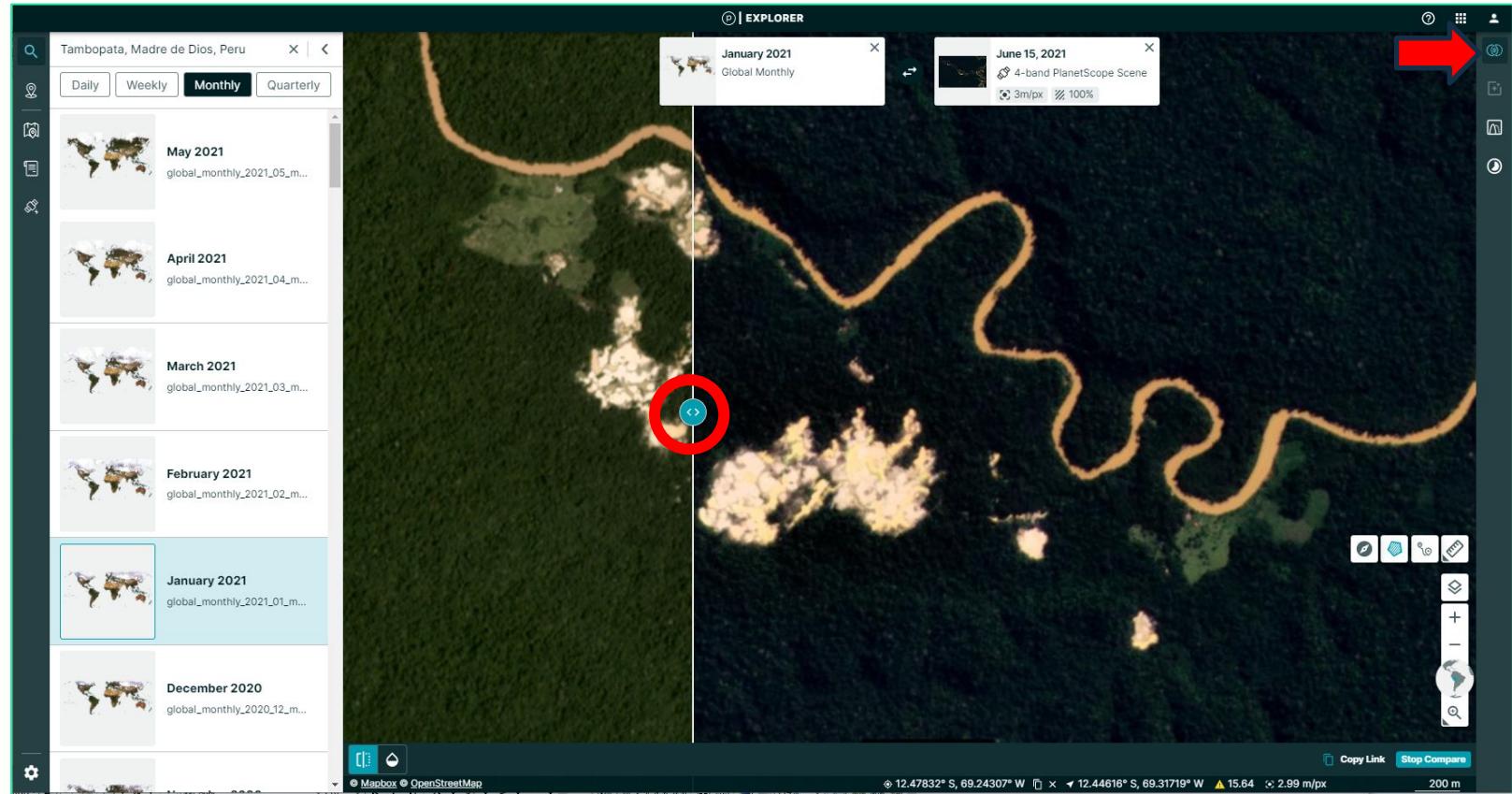


February 2021



Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb

2021
Connection





planet.

2016.07

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planet. | explore 21

Global
Connection



Technology
(MAAP
Monitoring)

Three Major Steps

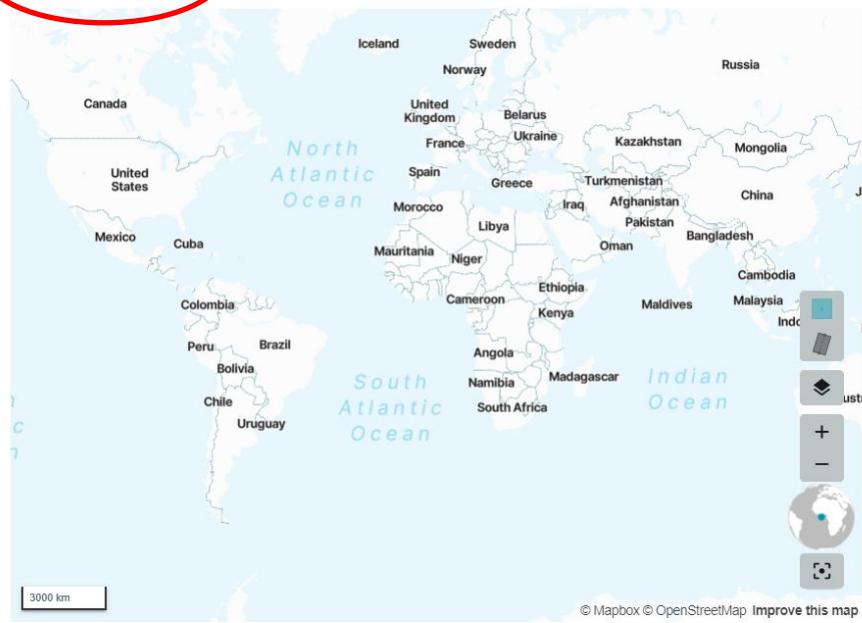
3. Tasking



- Very high-resolution (0.5 m)
- By tasking order



Create an order



Name

AREA OF INTEREST

Point

Line

Input here below the coordinates of your area of interest, or draw it on the map.

Latitude

Longitude

Center



Coordinates GeoJSON File Upload

TIME OF INTEREST

Cancel

Review Order

OCTOBER 2020

MAY 2018







Technology
(MAAP
Monitoring)

Three Major Steps

1. Alerts



2. Planet Imagery



3. Tasking





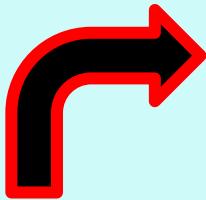
Monitoring of the Andean Amazon Project

Linking Technology with Action

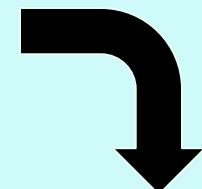


ACTION

(Policy, Admin, Legal, Operation)



Technology (Monitoring)



REPORTING

Public & Private



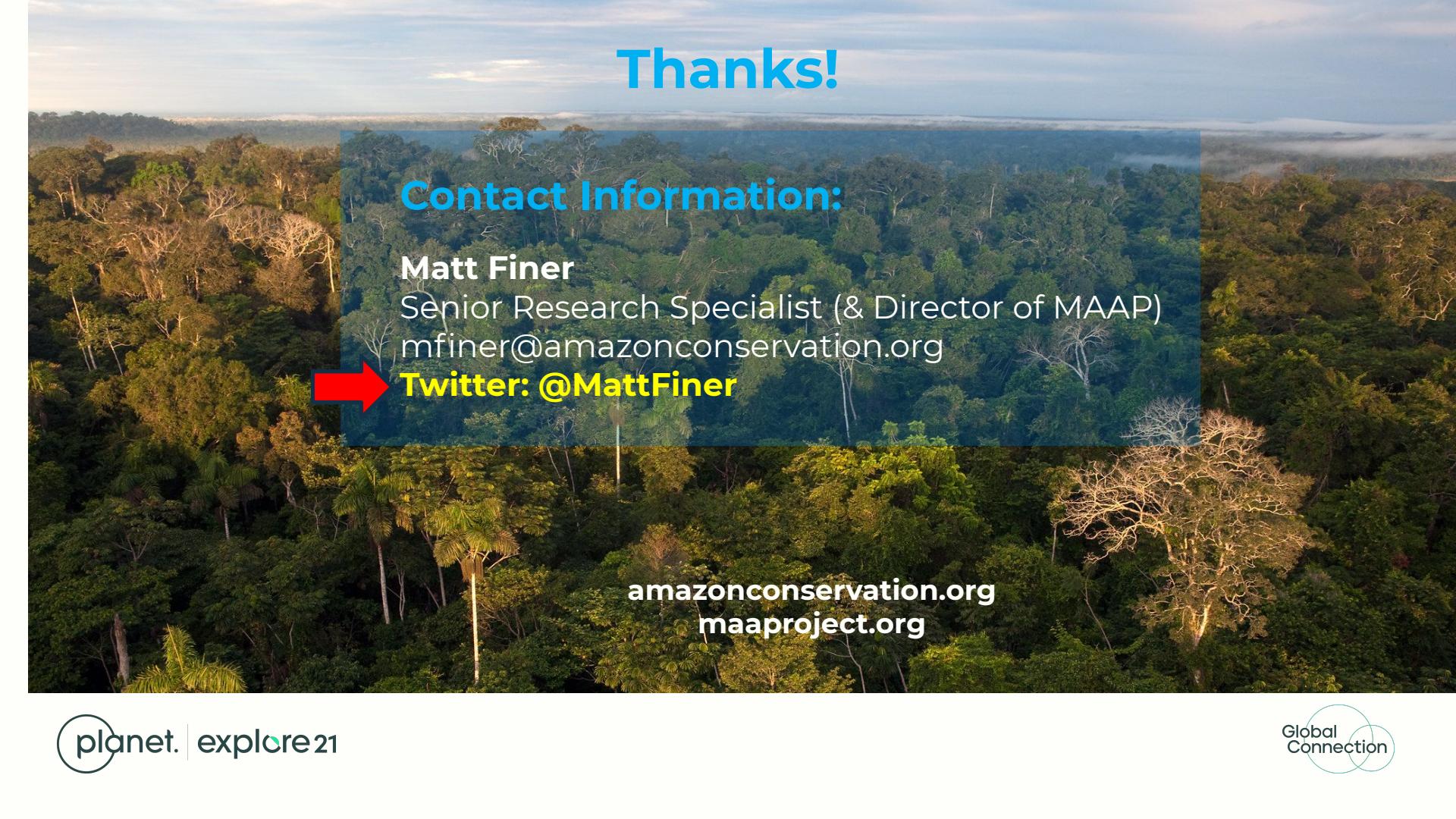
English:

<https://maaproject.org/en/>

Spanish:

<https://maaproject.org/es/>

The screenshot displays the MAAP website's homepage. At the top, there are logos for 'AMAZON CONSERVATION' and 'CONSERVACIÓN AMAZÓNICA ASEA'. To the right of the logo is a green 'ESPAÑOL' button with a red arrow pointing to it. The main title 'Monitoring of the Andean Amazon Project' is centered above a yellow navigation bar containing links: HOME, ARCHIVE, SECTORS, SYNTHESIS, INTERACTIVE, COUNTRIES, OTHER, and ABOUT MAAP. Below the navigation bar is a dark banner with the text 'MAAP #140 | JUL 15, 2021' and 'MAAP #140: DETECTING ILLEGAL GOLD MINING IN RIVERS WITH SPECIALIZED SATELLITES'. The central image is a satellite view of a river flowing through a dense green forest, with a small white boat visible on the water. Below the image are three news cards. The first card is titled 'AMAZON FIRE TRACKER 2021: AUGUST UPDATE' and includes a map of South America with fire hotspots. The second card is titled 'MAAP #141: PROTECTED AREAS & INDIGENOUS TERRITORIES EFFECTIVE AGAINST DEFORESTATION IN THE WESTERN AMAZON' and features a map of the Western Amazon showing protected areas and indigenous territories. The third card is titled 'MAAP #140: DETECTING ILLEGAL GOLD MINING IN RIVERS WITH SPECIALIZED SATELLITES' and includes a smaller image of a river scene. On the right side of the page, there is a sidebar with the heading 'ABOUT MAAP:' followed by text about the project's focus on near-real-time deforestation monitoring and its analysis based on satellite systems like Landsat, Planet, DigitalGlobe, Sentinel, and Perusat.



Thanks!

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