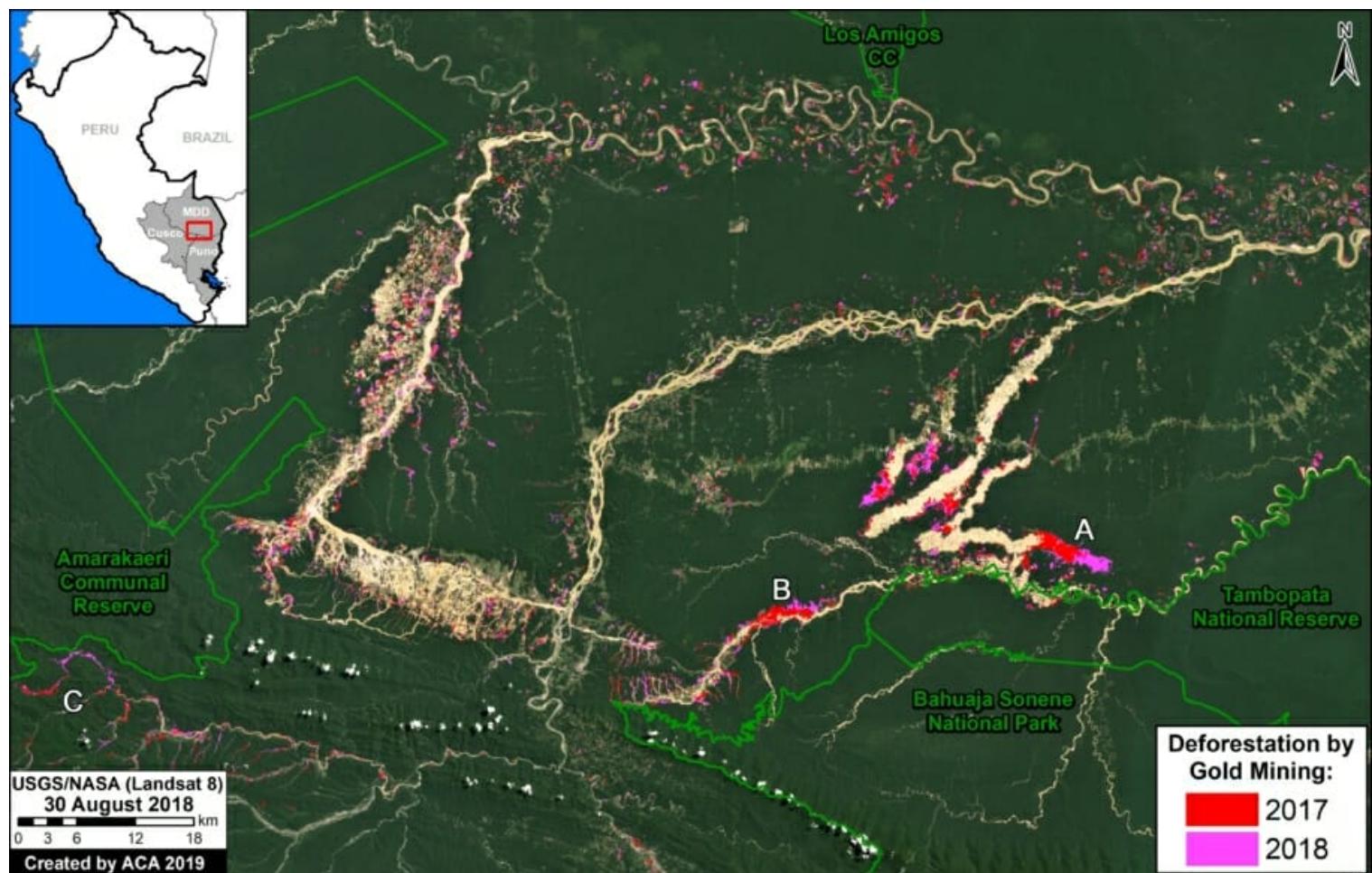


MAAP #96: Gold Mining Deforestation at Record High Levels in Southern Peruvian Amazon

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.



Base Map. Gold mining deforestation in southern Peruvian Amazon. Data: USGS/NASA, MAAP, SERNANP.

2017 had the highest gold mining deforestation on record at the time: 9,160 hectares (22,635 acres). According to recent research led by CINCIA (Centro de Innovación Científica Amazónica), this was the highest annual total on record dating back to 1985*.

In **2018**, we found the gold mining deforestation was even higher: 9,280 hectares (22,930 acres).

Thus, combined, **2017-18** had the highest two-year deforestation total on record: **18,440 hectares** (45,565 acres).

Note the location of **Zooms (A-C)** shown in greater detail below. These zooms represent three of the most threatened areas: A) **La Pampa**, B) **Upper Malinowski**, and C) **Camanti**.

Click (or right click) to enlarge (or download) images.

*CINCIA reports 9,860 hectares of gold mining deforestation in 2017 (CINCIA 2018, Caballero Espejo et al 2018), an estimate even higher than ours.

Zoom A: La Pampa

Image A shows the gold mining deforestation of 1,685 hectares (4,164 acres) between 2017 (left panel) and 2018 (right panel) in an area known as La Pampa (Madre de Dios region). **Red** indicates the major deforestation fronts.



Image A. La Pampa. Data: Planet, MAAP

As seen in the Land Use Map below (Annex 2), most of the recent mining deforestation in La Pampa is clearly illegal, concentrated in reforestation concessions and the buffer zone of Tambopata National Reserve.

According to the web portal [GEOCATMIN](#) (Geological Information System and Mining Register), developed by INGEMMET (Geological Mining and Metallurgical Institute of Peru), all titled mining concessions in the area are currently "without mining activity." None are in authorized Exploration or Exploitation phase. Most of the mining activity is outside these concessions and in areas not authorized for mining.

Zoom B: Upper Malinowski

Image B shows the gold mining deforestation of 760 hectares (1,878 acres) between 2017 (left panel) and 2018 (right panel) along the upper stretches of the Malinowski River in the Madre de Dios region. **Red** indicates the major deforestation fronts.



Image B. Upper Malinowski. Data: Planet, MAAP.

As seen in the Land Use Map below (Annex 2), the recent gold mining deforestation along the Upper Malinowski is advancing in the Kotsimba Native Community and within the buffer zone of Bahuaja Sonene National Park.

According to [GEOCATMIN](#), all titled mining concessions in the area are currently "without mining activity." None are in authorized Exploration or Exploitation phase. Most of the mining activity is outside these concessions and in areas not authorized for mining.

Zoom C: Camanti

Image 4 shows the gold mining deforestation of 335 hectares (828 acres) between 2016 (left panel) and 2018 (right panel) in the Camanti area of the Cusco region. **Red** indicates the major deforestation fronts. Note the increasing proximity of the mining to **Amarakaeri Communal Reserve**.

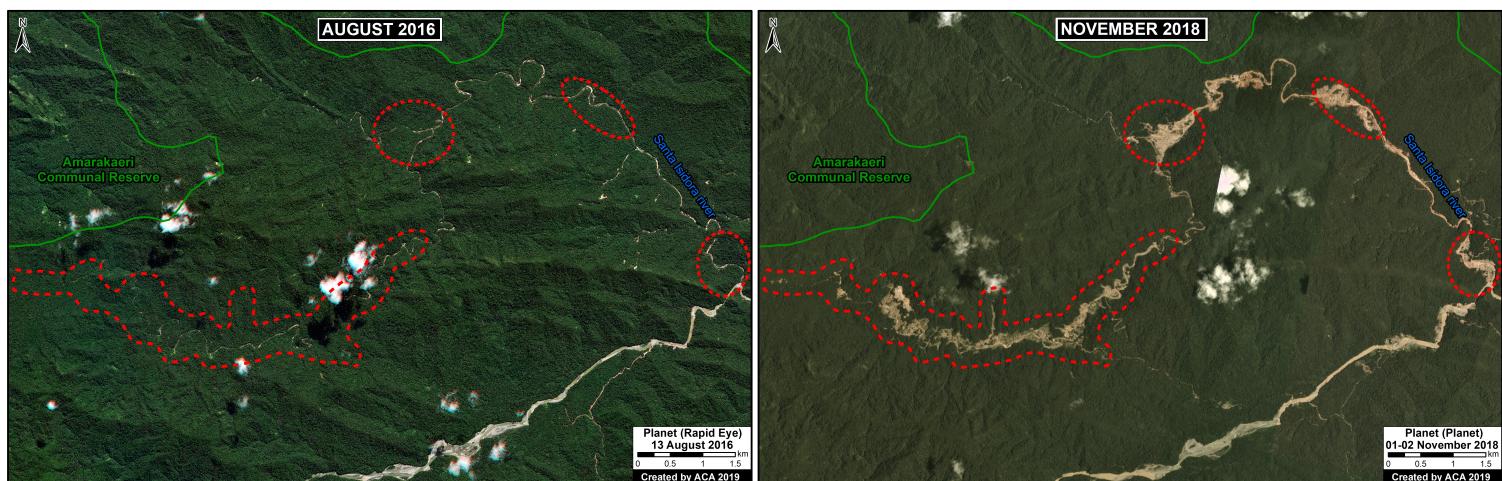
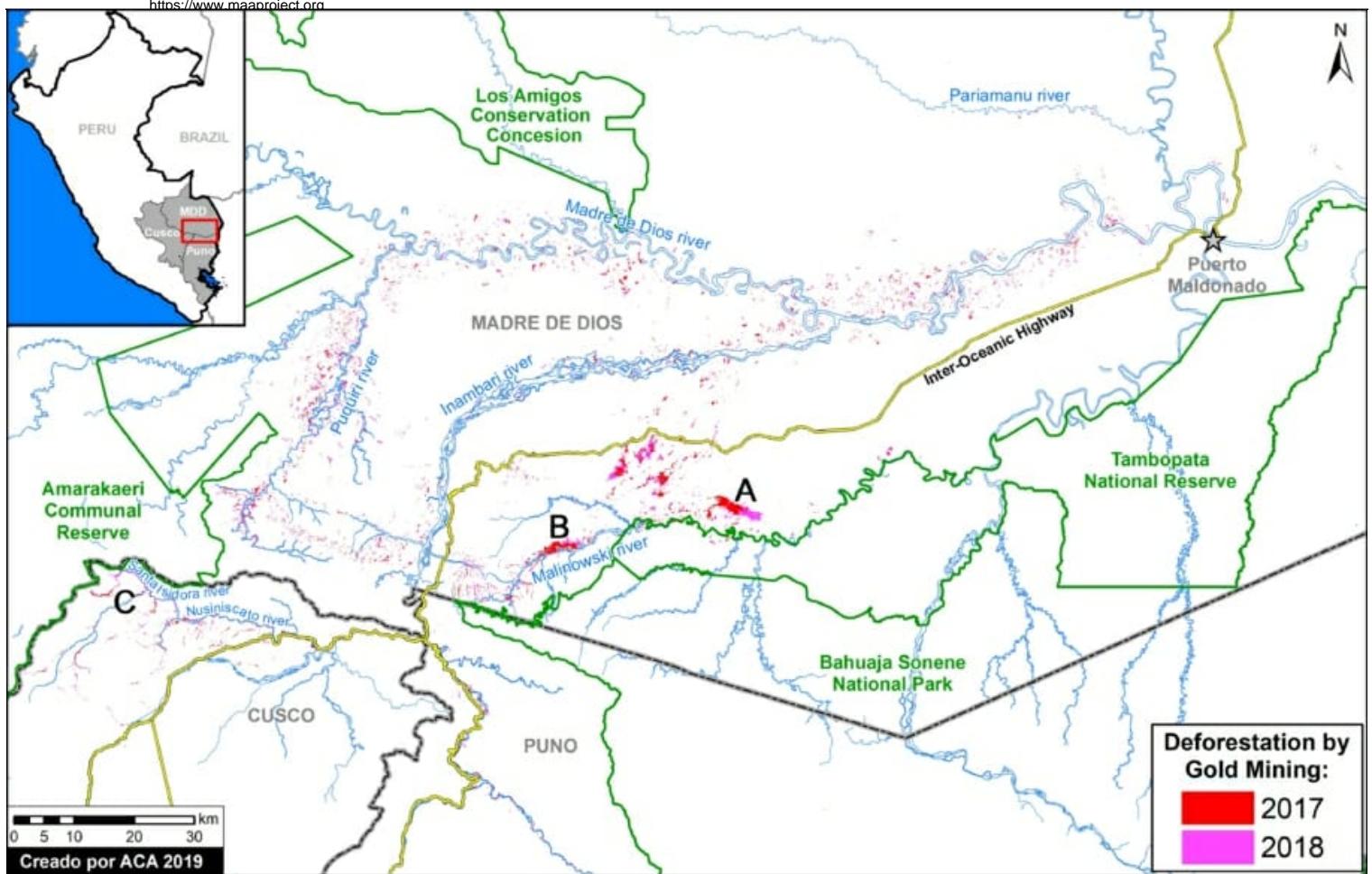


Image C. Camanti. Data: Planet, MAAP.

As seen in the Land Use Map below (Annex 2), the recent gold mining in the Camanti area is advancing in mining concessions that are "in process" of titling. According to [GEOCATMIN](#), there are no titled concessions in the area that are in Exploration or Exploitation phase.

Annex 1: Reference Map

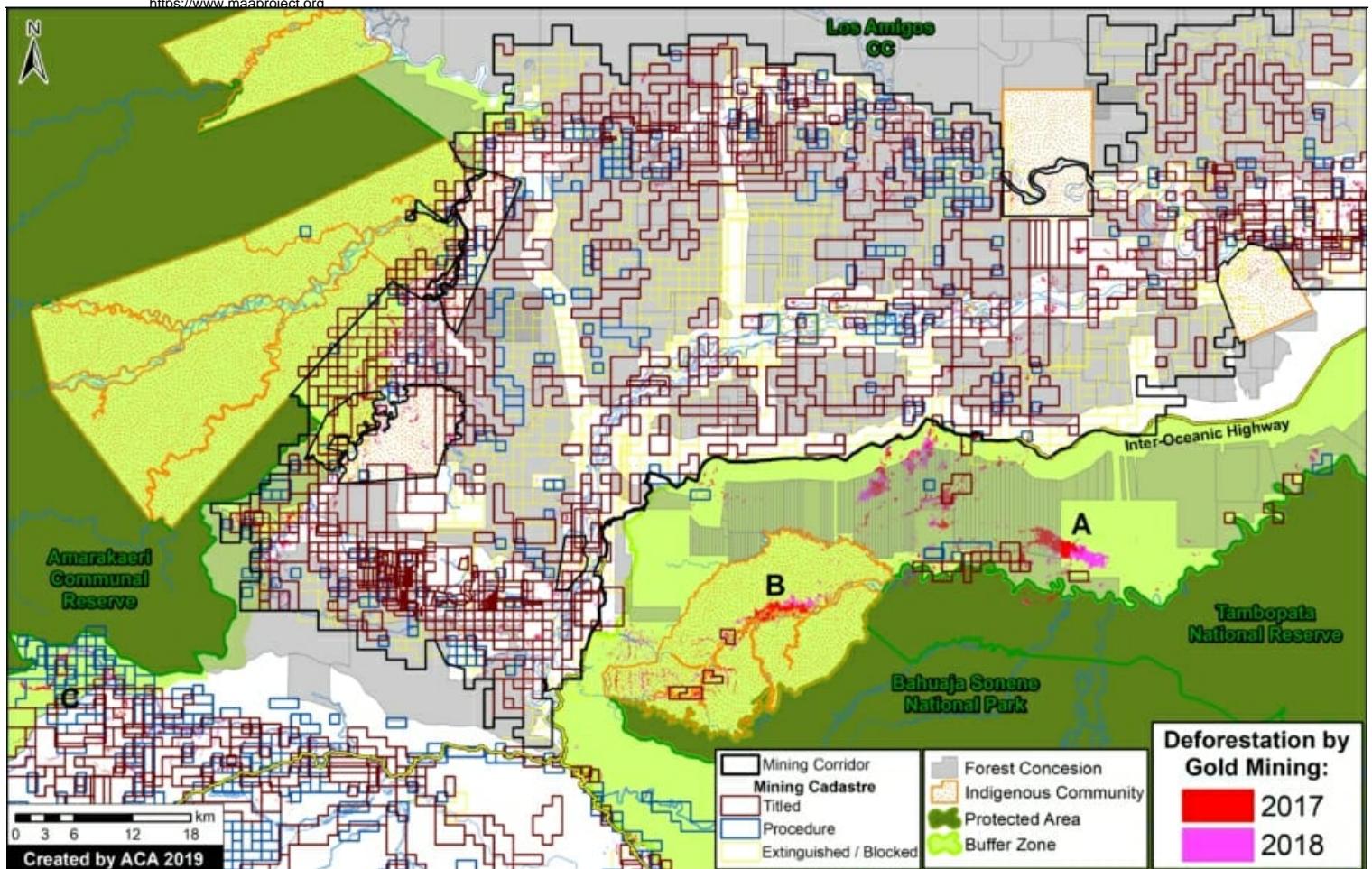
Annex 1 features a Reference Map of our full study area. The background is white to better indicate the mining deforestation areas. It also serves as a reference map with additional labels.



Reference Map. Gold mining deforestation in southern Peruvian Amazon. Data: MAAP, SERNANP

Annex 2: Land Use Map

Annex 2 features a Land Use Map with detailed data on mining concessions and other important land designations. The mining concession data comes from the web portal [GEOCATMIN](#) (Geological Information System and Mining Register), developed by INGEMMET (Geological Mining and Metallurgical Institute of Peru). We downloaded the data on January 2, 2019.



Methodology

We analyzed high-resolution satellite imagery (DigitalGlobe and Planet) for both 2017 and 2018 and digitized all new gold mining deforestation. Given the widespread mining across a large area, we also used automated forest loss alerts based on medium resolution Landsat imagery (PNGB/MINAM) to guide our analysis.

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