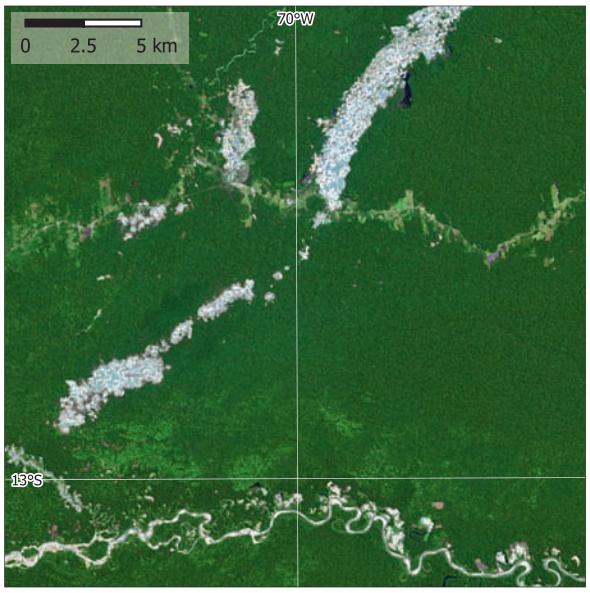
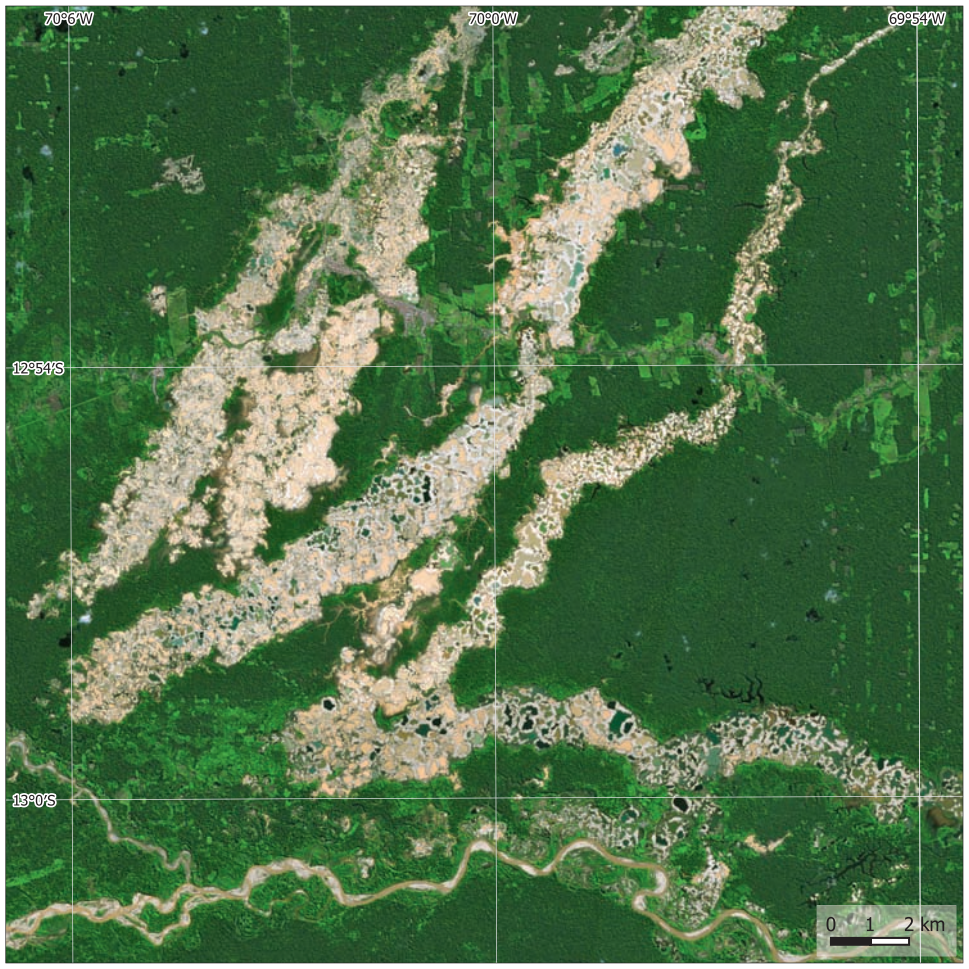


6. Gold mining in Madre de Dios, Peru in. In this region, small-scale mining has intensified since its start around 2000. Data: Landsat 5, 2011-09-03.

Gold Mining in Madre de Dios, Peru

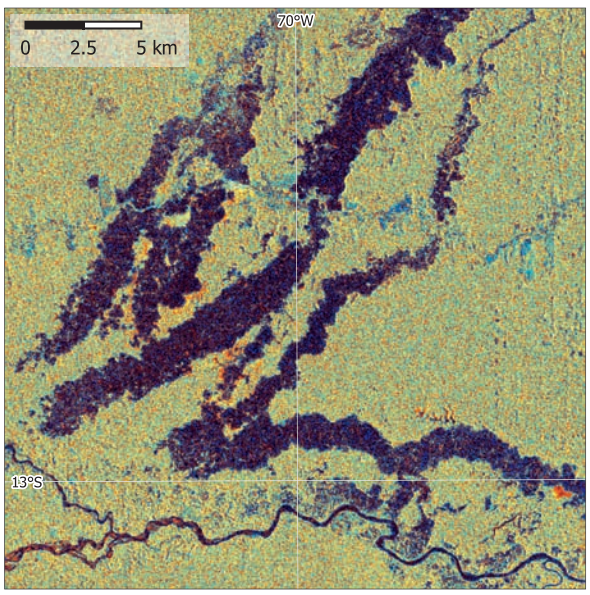
The region along the Rio Madre de Dios in the part of the Amazon Basin located in Peru has seen a significant increase in informal and illegal mining activities during the last two decades.

The mining activities have had negative environmental and social consequences, including deforestation, mercury pollution, and habitat destruction, endangering wildlife and indigenous communities. The extraction of gold involves the use of poisonous mercury. Released into the environment, it contaminates rivers and aquatic ecosystems. Between 30 and 40 tons of mercury are released into the food chain every year. This poses serious health risks to residents and to the environment. About 80 percent of the local population have enhanced mercury concentrations.

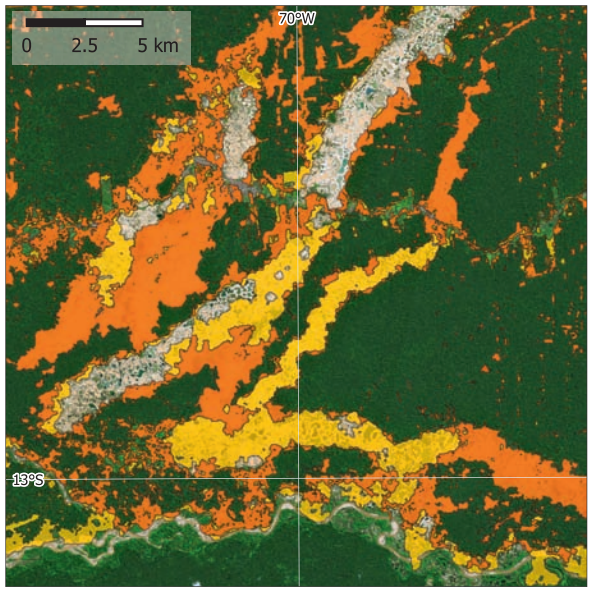


7. Gold mining in Madre de Dios. The satellite image shows the areas directly affected by mining. Additionally, new settlements and agricultural land can be seen. Data: Sentinel-2, 2023-06-03.

Efforts have been made by the government to combat these issues by regulating the mining activities. Satellite imagery plays an important role in monitoring and assessing the impact of these initiatives, helping to find a balance between economic development, public health, and the preservation of one of the world's most biodiverse regions. The future of gold mining in Madre de Dios hinges on finding sustainable practices that protect the environment and support local livelihoods.



8. Radar satellite data is a valuable tool for analysing land use changes, especially in tropic regions, where often clouds prevent from using optical data. Data: Sentinel-1, 2023-05-25.



9. Forest area change between 2011 and 2023 as derived from satellite data (yellow: forest loss between 2011 and 2016, orange: forest loss between 2016 and 2023).

10. Aerial view of the ponds remaining from gold mining activities in the Rio Madre de Dios region. The colours of the water reflect different concentrations of sediments and algae.