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CINCIA ACIERTA

Large areas of intact rainforest still cover the Amazonian regions of Madre de Dios and Loreto, the uncontrolled expansion of alluvial gold mining, often illegal, is affecting human and environmental health. The project aims to promote science and research programs to address and counteract these threats.

The expansion of alluvial gold mining has caused the deforestation of approx. 180,000 hectares of forest in Madre de Dios since the 1980s, while contaminating waterways with toxic mercury, which impacts human and environmental health. In Loreto, illegal mining activities are expanding rapidly along water courses which impact indigenous, rural and urban populations. The goal of CINCIA-ACIERTA is to build scientific capacity in the Peruvian Amazon regions of Madre de Dios and Loreto to address and counteract these growing environmental threats. CINCIA-ACIERTA leverages alliances with U.S. and Peruvian institutions to develop transformative solutions that promote sustainable development, combat environmental destruction caused by alluvial gold mining, and improve human health in the Peruvian Amazon.

HOW DOES THE ACTIVITY WORK?

The Centro de Innovación Científica Amazonica (CINCIA) fosters cutting-edge research to understand the impacts of gold mining in Madre de Dios and Loreto, strengthens the capacity of local research communities and the awareness of local stakeholders of mining threats. CINCIA introduces and pilots innovative and effective solutions like reforestation and restoration of mining areas using native plants and biochar, using AI to enhance drone and satellite imagery to better assess mining related degradation, and the use of aquatic drones to improve impact assessment of biodiversity in lakes and wetlands degraded by gold mining.

CINCIA works with a diverse network of stakeholders dedicated to reducing the impacts of gold mining in the Amazon. This network includes key research institutions in the Peruvian Amazon, such as the National Amazonian University of Madre de Dios (UNAMAD), the National University of the Peruvian Amazon (UNAP), and the Research Institute of the Peruvian Amazon (IIAP), along with over 15 national and international public institutions and private sector partners, including formal mining concessionaires and organizations committed to responsible gold mining.

RESULTS ACHIEVED

- Reforested 35 hectares of degraded mining areas, with plans to expand reforestation in La Pampa through an innovative partnership with the Peruvian Army Special Forces.
- Inaugurated the first analytical mercury laboratory in Loreto in collaboration with the Research Institute of the Peruvian Amazon (IIAP) and launched a major two-year baseline study to measure mercury pollution in three key watersheds in the northern Peruvian Amazon.
- Introduced innovative tools to improve the assessment of mining impacts on Amazonian rivers and lakes, such as the use of eDNA for rapid biodiversity assessments and aquatic drones in former mining sites for the evaluation and monitoring of water bodies.
- Established Acierta Amazónica, a scholarship program for university students in Madre de Dios and Loreto to stimulate research on ecological restoration and mercury contamination in the Amazon.
- Trained over 800 people and raised awareness among more than 1800 on the environmental impacts of gold mining, reforestation methods, the use of biochar for soil recovery, and mercury exposure threats.
- Produced 20 scientific publications, 18 research summaries and technical notes, and featured in 928 national and international media outlets.

PROJECT INFORMATION

IMPLEMENTER: Wake Forest University

COMPONENT DURATION: June 1, 2021 – May 31, 2026

USAID FUNDING: \$8.8 million

LOCATION: Lima, Loreto and Madre de Dios regions

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