Conservación Estratégica

MINING IMPACTS CALCULATOR

An online valuation tool to support decision-making and to estimate the social and environmental damage of illegal gold mining operations in the Amazon

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GORDON AND BETTY MOORE FOUNDATION

ASL Programa Paisajes Sostenibles de la Amazonia

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THE AMAZON REGION AT RISK

The use of mercury to obtain gold further aggravates the impacts of gold mining on the environment. This type of extraction has been causing serious damage to the Amazon and its expansion in the region brings with it transboundary, cumulative and irreversible consequences on the environment and human health. Information regarding these consequences must be included in the decision-making in the territories so as to mitigate and manage the destruction.

Although the use of mercury is permitted in some countries, the damage it causes to ecosystems and life is far greater than other methods of gold extraction. It is vital to understand the true cost of this type of mining in order to convince decision-makers of the benefits of cleaner extraction technologies.

The **Mining Impacts Calculator** was developed to offer information on the economic implications of the use of mercury in gold mining, to strengthen decision-making by better informing people of the environmental and social impacts inherent in this industry, and to help establish improvements in the regulatory framework of mining in the region.

WHAT IS THE MINING IMPACTS CALCULATOR?

It is an online, open access, economic valuation tool developed by Conservation Strategy Fund (CSF) that estimates the costs of the social and environmental damage from gold mining using mercury in Amazonian ecosystems. The tool focuses on three key aspects:

DEFORESTATION

EROSION

MERCURY CONTAMINATION

The approach employed in developing the calculator is based on academic literature validated by consultations with experts in the field, satellite data, secondary information, and available information concerning the local context (population density, species richness) in the region being investigated. The values that it the total costs incorporated in this Calculator are:

1. **Costs of recovering the mining area** and human well-being to the state prior to degradation.

2. "Opportunity costs" of mining or **the value of natural benefits lost** due to the presence of these activities.

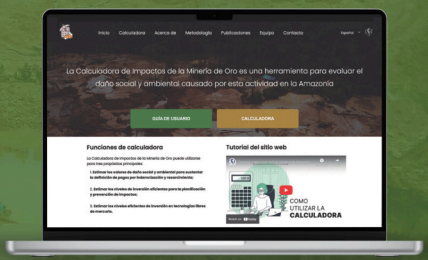
WHAT INFORMATION DO YOU NEED TO USE THE TOOL?

La herramienta brinda estimaciones según tres tipos de minería: **aluvial, balsa o socavón,** cada una de ellas cuenta con dos parámetros de información. Solo necesitas contar con uno de ellos para acceder a los cálculos.

IMPACT CATEGORIES	Deforestation					
	Erosion					
	Mercury contamination					
TYPES OF MINING	**Alluvial** (River bank)		**Dredge boats** (Rafts/Ferry)		**Pit** (Underground)	
INPUT PARAMETERS (Unit of measurement)	Size of impacted area	Amount of gold	Number of rafts in a year	Amount of gold	Years of mining exploration	Amount of gold
	- Hectares - Pit depth (m)	- Grams of gold - Profundidad del socavón (m)	- Ferries - Motor power	- Grams of gold	- Years	- Grams of gold

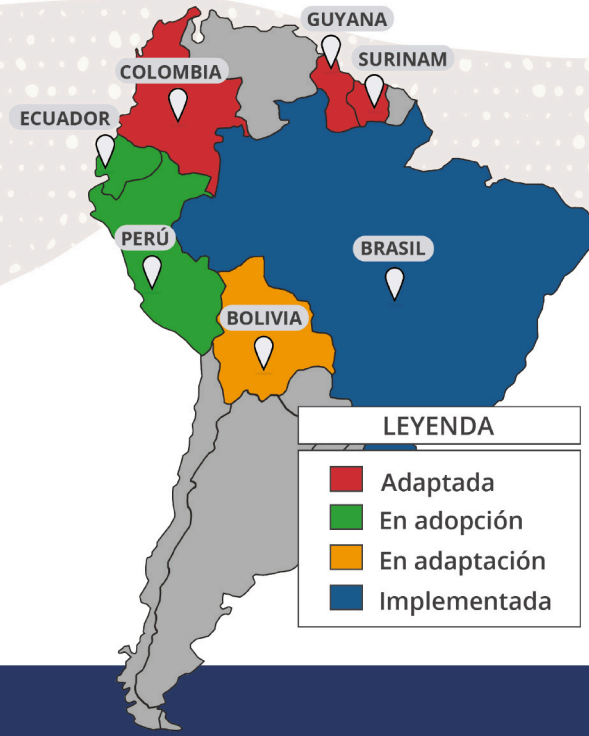
FROM BRAZIL TO ITS EXPANSION INTO THE AMAZON

Conservation Strategy Fund (CSF) created this tool in response to the need of the Federal Public Prosecutor's Office of Brazil to strengthen the establishment of stricter and more realistic penalties, in monetary terms, for environmental damage in the Amazon. This partnership has led to this tool's ongoing technical use in Brazil.



Thanks to numerous partners, the Mining Impacts Calculator has been adapted in Peru, Colombia, Ecuador, Guyana, Suriname, and will soon be available for Bolivia.

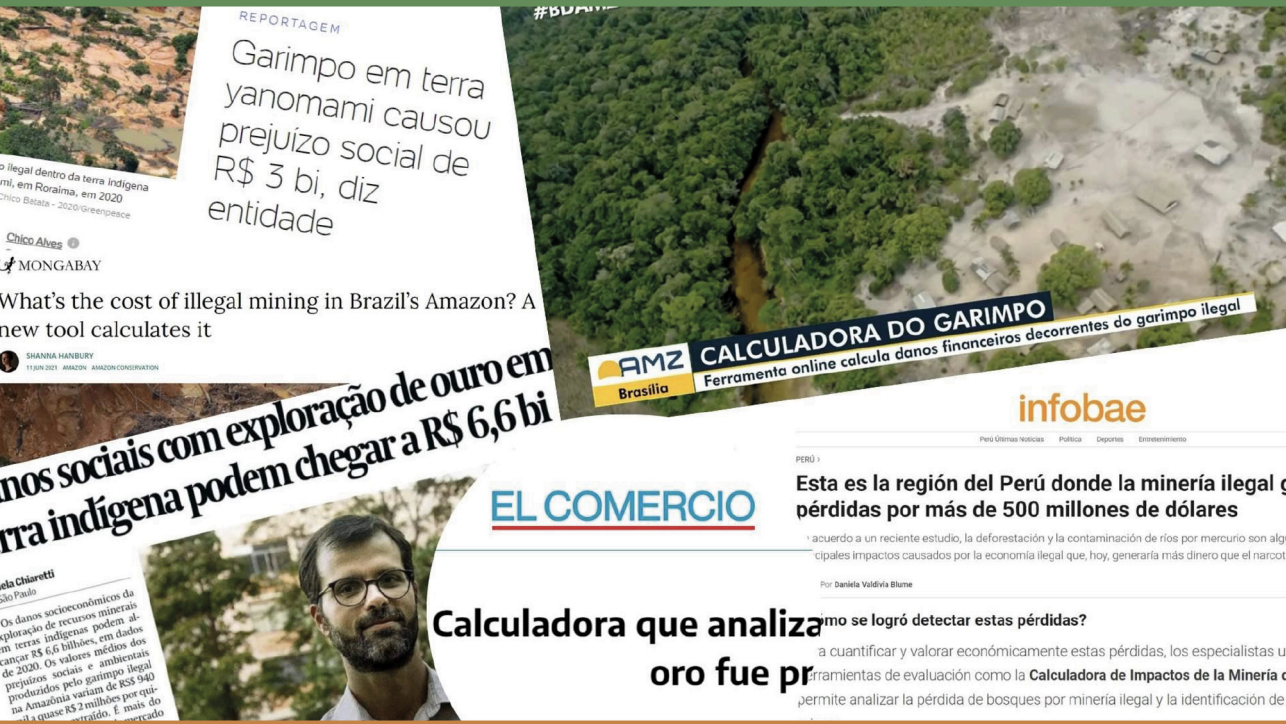
Countries	With the support of:
Brasil	Porticus
Bolivia Colombia	Amazon Sustainable Landscapes Program (ASL), under the leadership of World Bank (WB) and the support of Global Environment Facility (GEF)
Perú	ASL/WB/GEF Gordon and Betty Moore Foundation
Guyana	United States Agency for International Development (USAID)
Suriname	
Ecuador	Conservation XLabs USAID



BENEFICIOS

1. Provide key information for decision makers and local authorities who ensure the protection of the territory.
2. Filling information gaps on the real costs of using mercury in gold mining in the Amazon region.
3. Set realistic fines to prevent and mitigate the damage caused by these activities.
4. Strengthen judicial processes with economic information.
5. To demonstrate the reality of the impacts versus perceived benefits of the activity and raise awareness about the irreversible damage to the environment and people's health caused by the use of mercury.
6. Promote the use of mercury-free technologies in medium and small-scale gold mining.

MEDIA COVERAGE OF THE TOOL'S ESTIMATES



TRY THE TOOL

MORE INFORMATION:

- www.conservation-strategy.org
- @conservationstrategyfund
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- @numbers4nature
- /numbers4nature

https://miningcalculator.conservation-strategy.org