

# Environmental and Social Impacts of Gold Mining Operations in Latin America



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# Gold Production in Latin America

- Gold production creates more waste per ounce than any other metal
- At least 50% of gold produced worldwide is used for cosmetic, non-essential purposes
- 27% of all gold mining exploration took place in Latin America in 2009, especially Peru, Brazil, Chile, Mexico
- Attractive source of foreign investment for Latin American governments



# Large-Scale Operations: Social Impacts



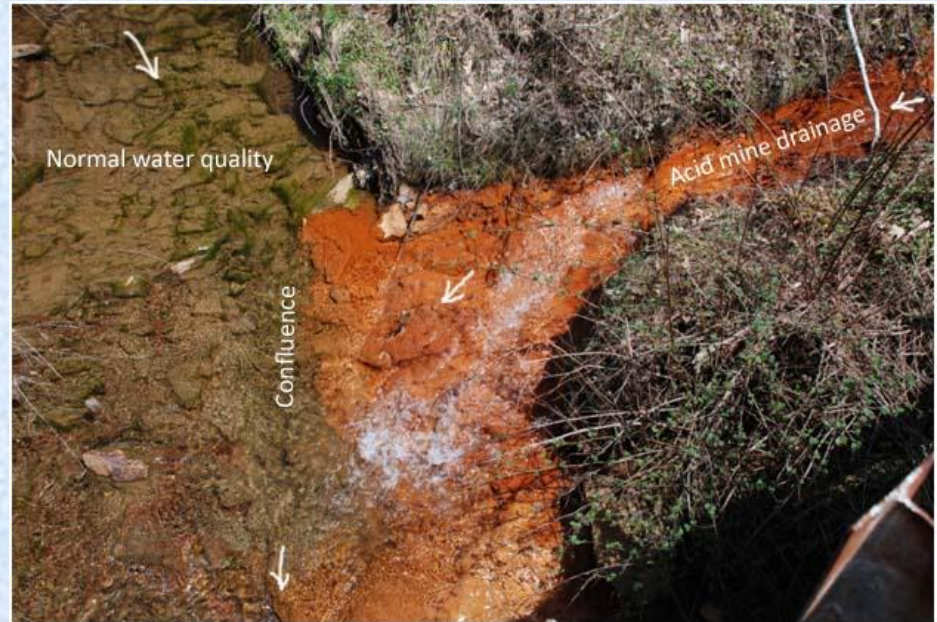
- Residents v. corporations: an unfair fight
- Protests often met with violence/arrests
- Indigenous communities especially affected
- Does not bring permanent economic opportunity

# Large-Scale Operations: Water Depletion and Contamination

- Large quantities of water needed
  - Angostura Mine in Colombia: 250,000 liters of water to be used *per hour*
- Acid Mine Drainage (AMD)
- Cyanide contamination
  - Sodium Cyanide solutions used in leaching: 300-600 mg/l
  - U.S. Environmental Protection Agency maximum contaminant level: .2 mg/l
- Increased sediment in rivers



# Acid Mine Drainage



## Lara River in Honduras

- 300 gallons of cyanide solution spilled
- 18,000 dead fish
- Contaminated 4.5km of river





# Large-Scale Operations: Soil Removal



PHOTO: CHRISTOPHER LAMARCA/REDUX

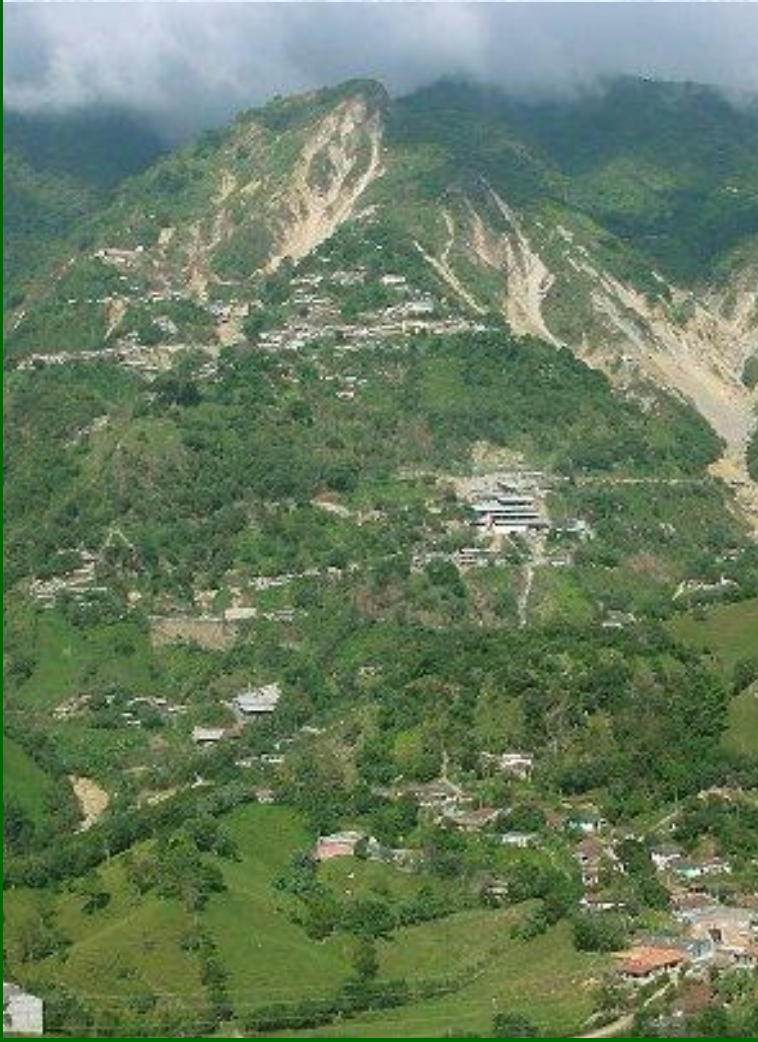
Open-pit mining and mountain-top removal require huge quantities of land to be displaced

- Often located in protected forest areas



## Marmato Mountain, Colombia

- Mountain-top removal
- 30,000–60,000 metric tons of rock to be removed daily



## Angostura Mine in Colombia

- 1,100 hectares of protected forest reserve
- 975 million metric tons rock to be removed



# Free Trade Agreements and Mining

**BLACK FIRE**  
exploration ltd.

 **COMMERCE  
GROUP  
CORP.**

 **Crystalline**  
International Corpora

  
**vannessa**  
VENTURES LTD

  
**INFINITO GOLD LTD.**

 Gold Reserve Inc.

**PACIFIC RIM**  
**MINING CORP.**

- El Salvador, Venezuela, Mexico, Jamaica, Bolivia, and others who have said “no” have been sued by foreign mining companies



# Illegal/Informal Mining Sector

- Only source of income for many
- Miners frequently uneducated about health and environmental effects of activities
- Dredgers destroy river habitats
- Widespread use of mercury
  - Estimated 1,000 tons released annually



# What can be done?



- Increased education for miners
- Increased communication between companies and communities
- Strengthening monitoring and enforcement mechanisms
- Balancing environment and economic concerns