



This banner reads 'Mining contaminates, causes disease and kills. Anglo Gold Ashanti get out of our district.'

- grinding the rock more finely and spraying it with water containing cyanide to flush out the gold
- piling waste rock into slag heaps

The mountain and its forest vegetation, habitat for innumerable species and source of clean water, will effectively disappear.

### The benefits of gold mining

AGA hopes to persuade local people that the future will be better if the economy is based not just on agriculture but also on mining. The company has shown that there are 'significant' gold deposits in the rocks, estimating that there are 26.8 million ounces in the Colosa Mountain. Extracting this gold could provide jobs for local people for many years.

The company states that it is committed to mining in a responsible and environmentally sensitive way to lessen the detrimental effects of the process. It points out that if it is prevented from developing the mine, illegal miners will move in and extract the gold in a makeshift way, creating far more ecological damage. Based on the

# Gold mining in La Colosa, Colombia

## Should it go ahead?

A proposed gold-mining project in Colombia could bring economic benefits, but at what environmental cost? This article considers both sides of the argument

In spite of decades of deforestation, Colombia still has important fragments of forest and moorland (*paramos*). These trap and store rain

water, so they are vital in ensuring a good supply of clean water for domestic and agricultural use. However, precious stones and minerals, including emeralds and gold, are found in the Andes, and the Colombian government wants to exploit these to boost the country's economy. This threatens the natural environment.

### Mining impacts

Emeralds are found in hydrothermal veins and can be mined underground but gold is dispersed and must be extracted by open-cast mining. The rock has to be taken away, ground, washed and treated with toxic chemicals.

Canadian, Australian and South African mining companies are already prospecting and extracting minerals in Colombia. Their progress has been held up as they wait for government agencies to establish the limits of the protected

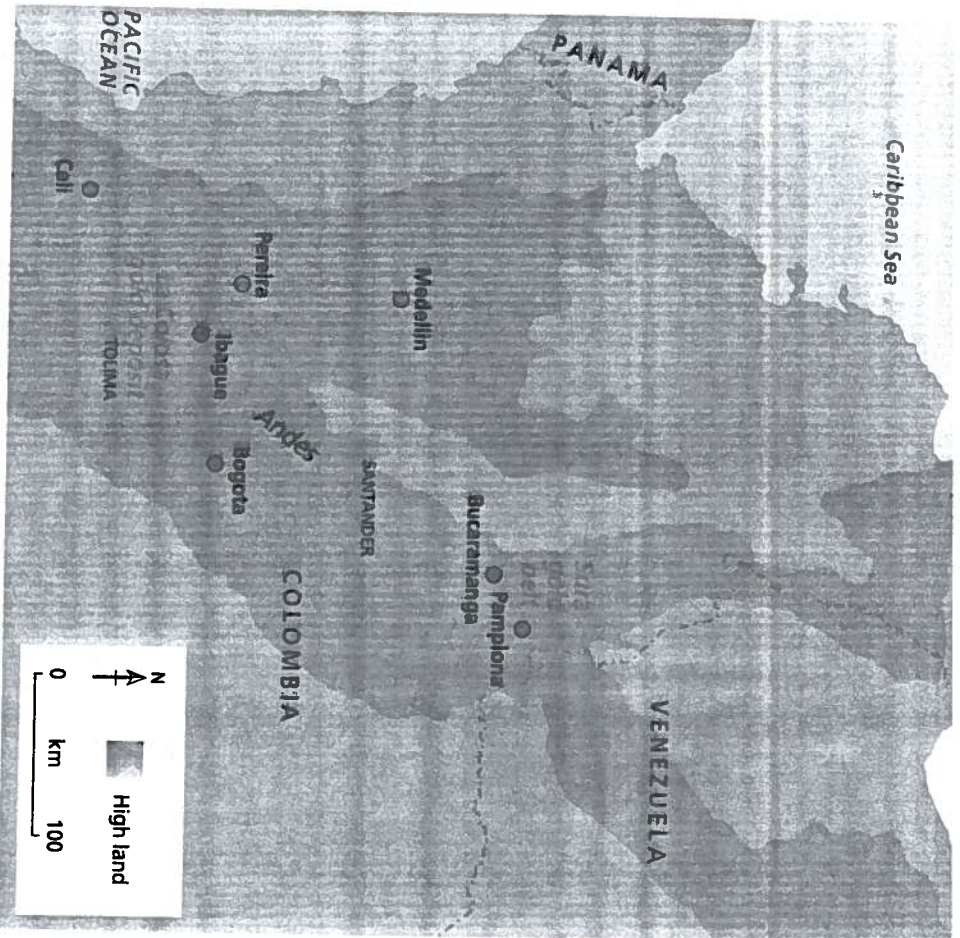
areas. Mining will not be permitted in the *paramos* (the highest areas of moorland), which are most important for water collection.

### Mining plans at La Colosa

Anglo Gold Ashanti (AGA) is a multinational mining company based in South Africa and the world's third largest gold producer. It has been prospecting since 2006 at La Colosa, in the mountainous Tolima district of Colombia (see Figure 1). It plans to start mining for gold in 2018.

There is estimated to be about 1 ounce (28 grams) of gold per ton of rock at La Colosa. The extraction process will involve

- stripping the mountain of its vegetation and soil to expose the rock beneath
- dynamiting the rock
- moving the roughly ground rock on conveyor belts through mountain tunnels to a site with plentiful water and suitable topography for creating reservoirs



**Figure 1** The location of La Colosa

evidence in other parts of South America, this is probably true.

### The problems

The Colombian government, AGA shareholders and people who have found employment at the mine site at La Colosa (currently 1,000) support the idea of mining the gold. But other local people are worried about the possibility of pollution and the degradation of the landscape.

### Pollution

Cyanide is toxic. AGA has assured the public that the cyanide used in extracting the gold will not escape into nearby streams or the aquifer (the water which lies below ground). The aquifer is essential in providing drinking water and irrigation water for the rice farmers on the lower-lying land. Many people are worried about possible pollution.

**Open-cast gold mining in Tanzania.** La Colosa would look much like this if the mine goes ahead

### Landscape degradation

Open-cast mining will lead to large-scale destruction of the beautiful Andean landscape. The photograph below of an open-cast gold mine in Tanzania run by AGA gives an idea of how La Colosa will be changed.

The company is obliged by law to rehabilitate 8 hectares of forest for every hectare destroyed, but this will be in another area and will probably involve planting monocultures of species such as pine in sustainable forestry projects. Many local people feel that this will not compensate for the destruction of a whole mountain of virgin cloud forest and high Andean forest.

### A bad start

AGA identified a site 100 km from La Colosa for the final stage of grinding, spraying, and washing the rock to extract the gold. The site is on the edge of rice fields where the land is undulating, and so perfect for a reservoir. It lies directly above a part of the aquifer that can be tapped for water.

The company rented a farm and started drilling for water but failed to obtain permission from the local environmental agency. The community, seeing trucks of equipment being driven to the drilling site, became concerned and raised the alarm and the environmental agency moved in and closed down the operation.

### Local opposition

Environmental committees in the area have been vigilant ever since and, seeking legal advice, local people obtained permission to hold a referendum in





July 2013. The result was that 92% of voters were opposed to the 'exploration, exploitation, treatment, transport, washing of materials...from gold mining...and the use of superficial or subterranean water.' This was an important achievement for the small community although the chance of the vote surviving the scrutiny of the nation's top lawyers is remote. In any case AGA says the referendum does not apply to it because the company is not named and the description of the mining process is that of illegal mining. They claim they would mine in a controlled, sustainable way.

Local people are continuing with their passive resistance to any activity by AGA. The company has been working hard to win them over through a variety of community programmes. It has equipped local meeting rooms with chairs, computers and video projectors so it can present its arguments, and is offering women courses in hairdressing and small business start-ups, and setting up football clubs for children.

The fight against mining in La Colosa has become international, as the photograph below demonstrates.

### Threats and violence

There have been threatening communications, verbal and written, to those opposing the mining activities. A



Prospecting has been taking place at La Colosa since 2006

state employee was told she would lose her job and her pension if she continued being an activist.

In October 2013, near La Colosa, two petrol bombs were thrown onto a car carrying five geographers who were surveying the area for the government to determine the boundaries of the *páramo* above which no mining should be allowed. The driver suffered 65% burns and later died. In a separate incident a

Protesters outside the Colombian Embassy in London on World Environment Day (5 June 2014) making a stand against gold mining in La Colosa



week later, one of the most active leaders of the environmental committee in the area was shot dead as he was returning to his homestead on his mule. AGA has expressed its emphatic rejection of violence of any kind and has asked the UN to investigate the crimes.

### The bigger picture

Opposition to mining has been gathering momentum throughout Colombia and more widely in South America. The experience of the Pascua-Lama gold mine in Chile and Argentina demonstrates that besides complete environmental degradation, mining operations often lead to job insecurity, inflation, social division, heavy traffic and poor health.

In 2010 the government of Costa Rica, well known for its strong protection of the environment, voted to ban all new open-cast mining projects in favour of preserving the tropical rainforest and water supplies. Few other governments are prepared to alienate multinational companies in this way.

The conventional economic belief is that emerging countries need foreign investment and expertise to exploit their mineral resources and reduce their dependency on agricultural products. The question is: how much of the profit from mining will stay in the country and is it worth the loss of important ecosystems which guarantee water supplies for future generations?