

Timeline of the Amazon

How COVID-19 may have similar effects as first European contact.

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First Contact Diseases

Prior to European arrival there were not any notable diseases that affected the Indigenous people of the Amazon. Upon European arrival, the explorers brought many surprises along with them like tools, resources, and agricultural practices. Diseases, disorganization, and disposability, also known as the three D's, were also introduced upon arrival. At the time, Indigenous people were vulnerable to all the diseases because they had never encountered them before; therefore, had no immunity. The first disease that left a hefty mark on the Indigenous population was smallpox, which is a disease that attacks the immune system and causes flu-like symptoms along with rashes. This sickness ultimately leads to death.



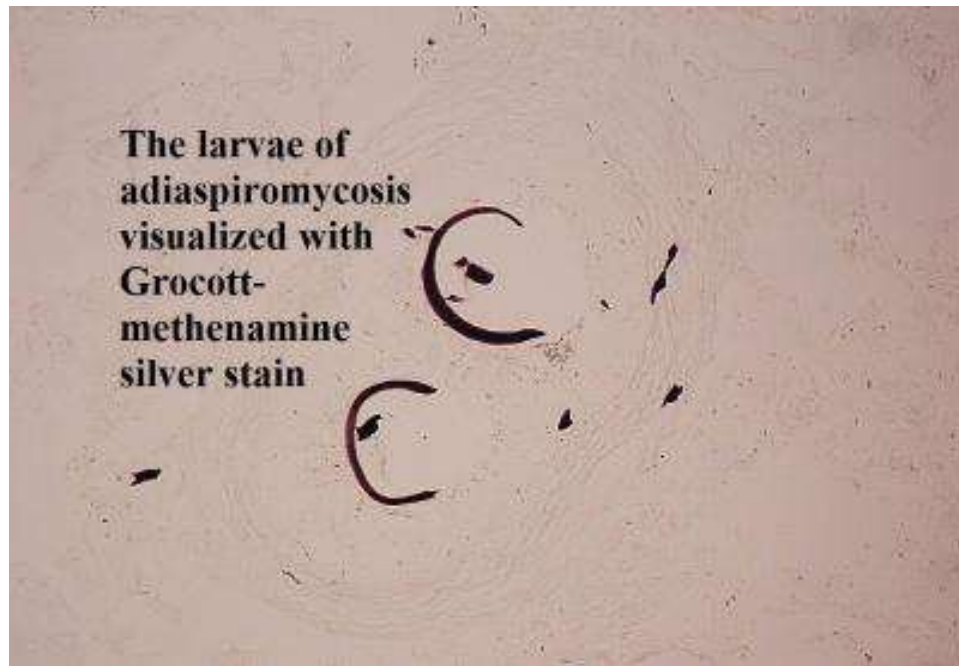
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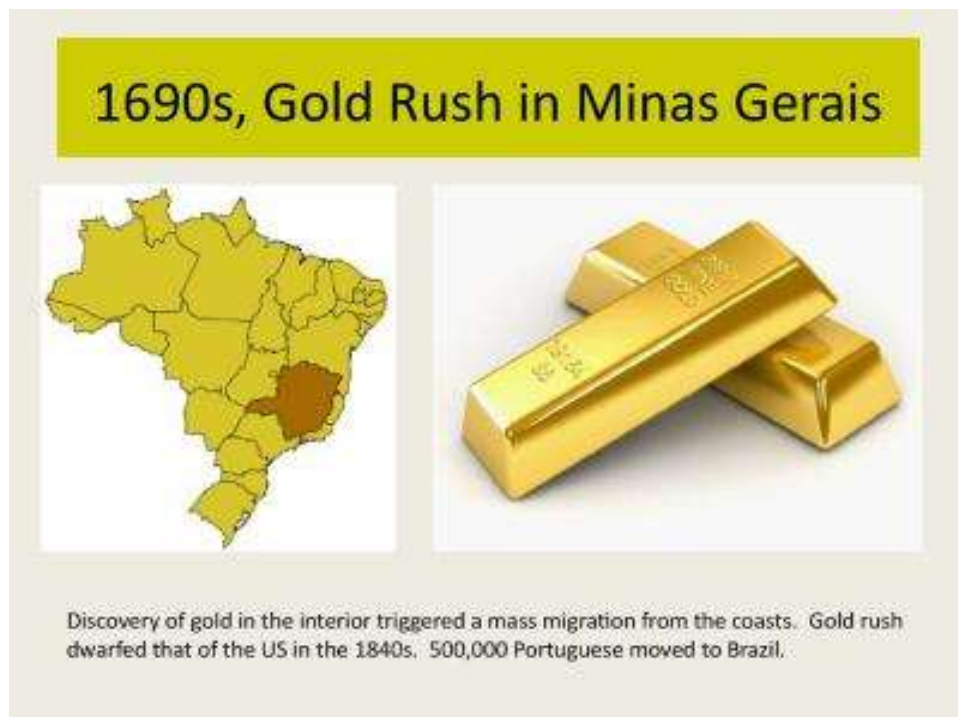
The Effects of European Arrival

Compared to many other regions around the world, the Amazon has a handful of diseases that are affecting people to this day.

Adiaspiromycosis is a rare disease that is primarily found in the Amazon because it is caused by the inhalation of soil dust that contains emmonsia. This disease was seen as early as 1986 in Brazil, and has since spread throughout the Amazon.



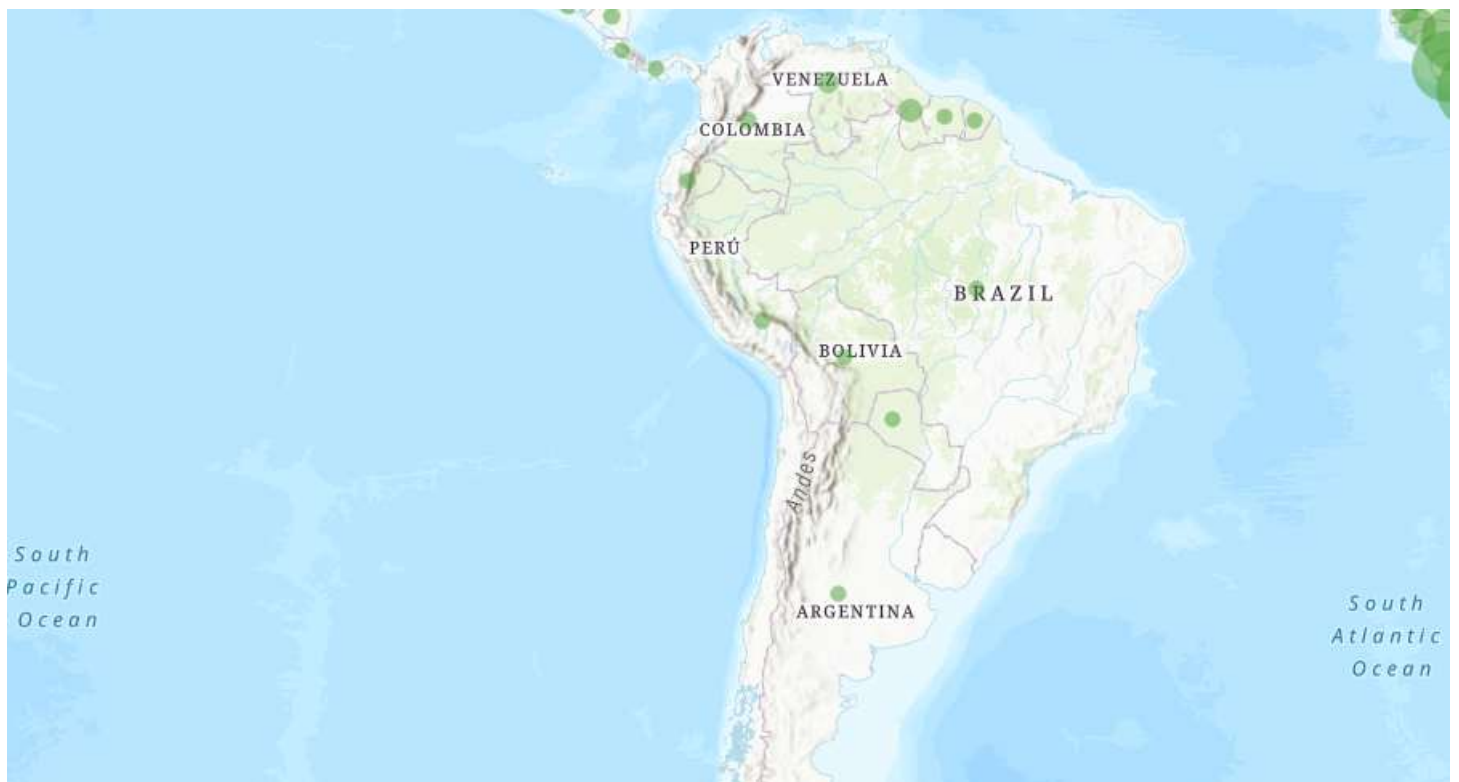
Then gold miners, settlers, and rubber tappers brought along malaria, measles, and influenza. Measles and influenza are no longer major concerns for Indigenous peoples, but at the time of European arrival, nearly 90% of the first American peoples were wiped out. Malaria still affects not only Indigenous people, but everyone around the whole world. To this day, it is the number one killer in the world as mosquitos often transmit other diseases or malaria itself.



Then there is the Brazilian Purpuric Fever, which is a disease caused by a bacteria that young children are more prone to, which can result in death. The first case was seen in Promissao, Sao Paulo State, Brazil in 1984.



In the Amazon there are many insects that spread diseases, the most well-known being Malaria. Malaria has been around since Europeans came and settled in South America, but still haunts many Indigenous peoples to this day.

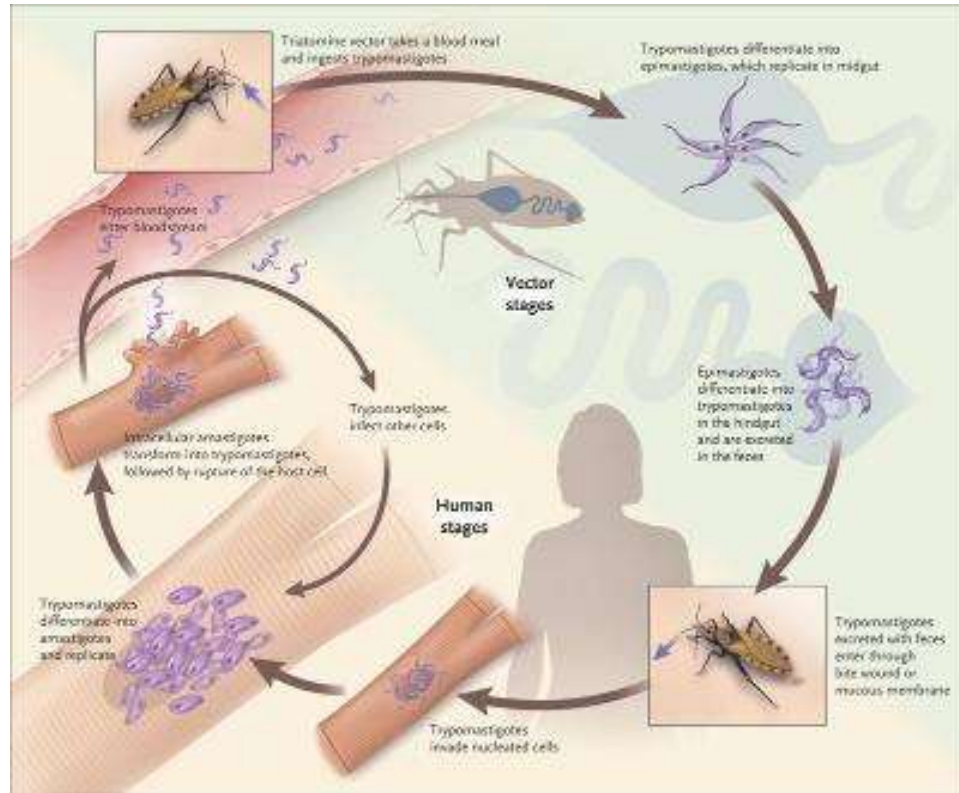


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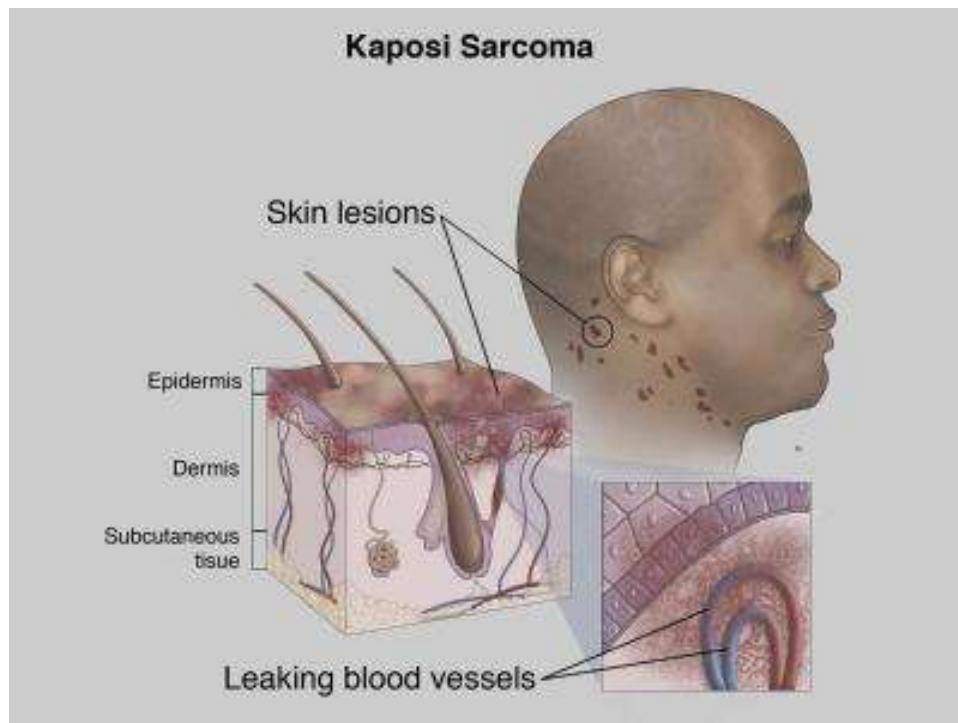
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Malaria

Another insect driven disease is Chagas, which was first found in 1969 in north Brazil. This disease is caused by a parasite found in the feces of the triatomine bug when it bites, and can ultimately lead to congestive heart failure if not treated properly.



One of the final ongoing diseases in the Amazon is the Kaposi sarcoma-associated herpesvirus and there is not a specific mode of transmission, but data suggests through saliva and shedding of genital secretions. This was seen as early as the 1950's.



The Long Lasting Effect - Deforestation

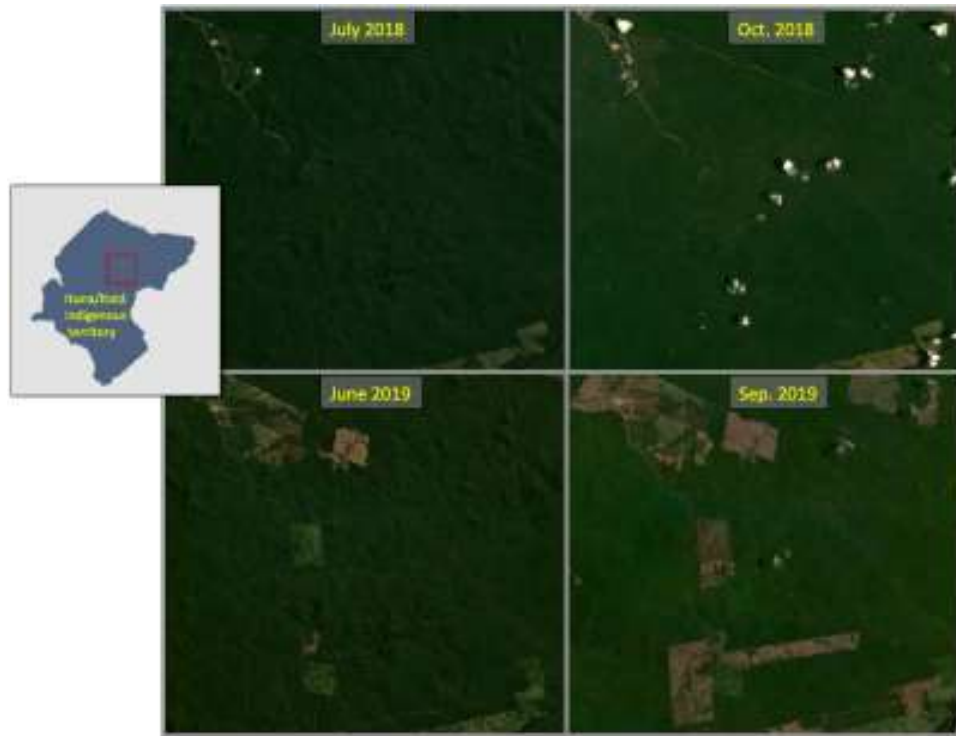
Since the very arrival of the Europeans in America, especially South America, deforestation has been an incredibly important issue in the Amazon rainforest and the surrounding areas. While there are little records of the total forested land area before the arrival of the Europeans in South America as well in subsequent centuries, in recent decades there have been detailed records of deforestation and its effects on the plants, animals and Indigenous groups living in the Amazon. Two very clear examples of extreme and rapid deforestation in the recent decades are deforestation in the Ituna Itata Indigenous land and the deforestation in Brazilian state of Rondônia.



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Deforestation

The deforestation in the Ituna Itata Indigenous land is due to illegal land clearing. “Illegal loggers and militias cleared an area three times the size of Gibraltar in Brazil's Amazon this year [2018], threatening an "uncontacted" indigenous tribe” (Mendes). According to simple calculations, the total land area cleared by illegal activity is roughly. The total land area cleared in 2018 was more than 13.4 square kilometers, with a total amount of land cleared in the Ituna Itata area reaching up to 4,600 acres in 2018 (Mendes). This illegal land clearing directly affects the indigenous people in the Ituna Itata land. The Indigenous people are classified as uncontacted and since 2011 the Ituna Itata land has been closed to outsiders. When the illegal loggers clear the forests, they are diminishing the area where the Indigenous people need to hunt and gather the food for survival. The Ituna Itata people “are particularly vulnerable when their land rights are threatened because they lack the natural immunity to diseases that are carried by outsiders” (Mendes).



In Rondônia, the amount of deforestation is incredible. Observed to the left are images of deforestation in the state from 2001 to 2012. Out of the state's original 208,000 square kilometers of Amazon rainforest coverage, over 67,764 square kilometers have been cleared (EarthObservatory). The statistic is from 2003, so it is very plausible that much more forest has been cleared since then. The deforestation begins with legal and illegal roads through the Amazon. The roads take up land area and to construct a road, land needs to be cleared. Sometimes areas along the roads are claimed as crop areas and are also cleared. Rain and erosion deplete the crop land. It then transforms into cattle grazing areas and more land sound is turned in the crop area and the cycle repeats itself (Mendes). This deforestation threatens wildlife, plants, fresh/clean water sources, and Indigenous lives.

The video below displays the spread of deforestation in Rondônia over a span of 12 years.



Below again is the Brazilian state of Rondônia, which is roughly half the size of Ireland. This two photos outline the large amount of deforestation that has occurred. The first photo was taken by NASA in July, 19, 1975 (L) and the second in August, 27, 2014 (R)



Rondônia - July 1975 - August 2014

As stated previously, the causes of the deforestation are:

- Land clearing for roads

- Mining

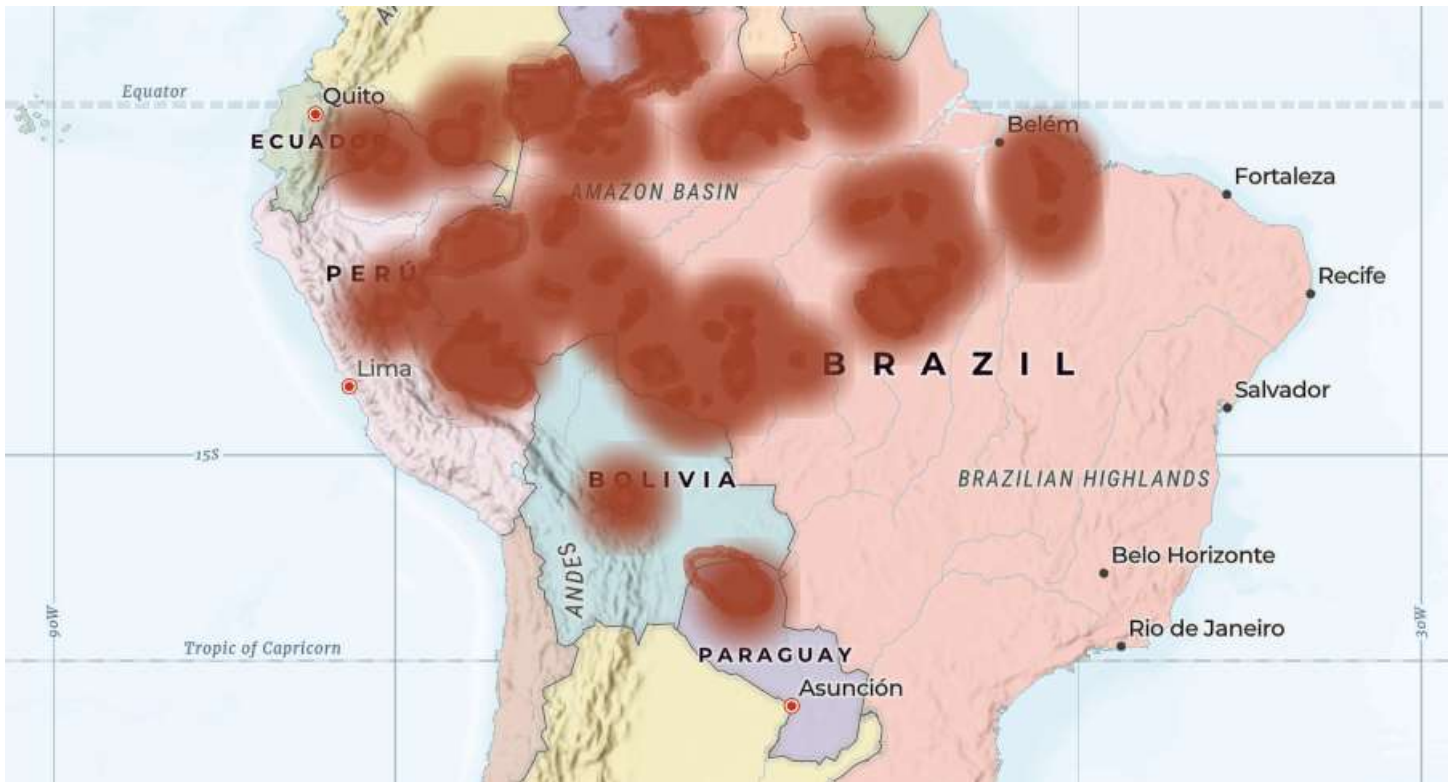
- Cattle ranching

- Soybean farming

The Long Lasting Effect - Westernization

Today, many Amazonian tribes live in Indigenous reserves known as *resguardos*, or an area of protection. Like tribal reservations in the

United States, these areas are where the Indigenous people's lifestyle incorporates both traditional and modern practices. Some Amazonian tribes have yet to make contact with outsiders as they survive in seclusion from modernism (examples highlighted in red below). Those who are secluded do not require any assistance from governments nor do they concern over economic status. They continue to thrive through traditional practices as hunter-gatherers (Panda.org).



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Uncontacted Tribes in the Amazon

Of course, the experience is different for the tribes who have been affected by economic development. Industrialization tends to have significant impacts on cultural practices. People must find opportunities to improve their social, economic, political, and technological aspects in order to survive in an environment that has been dominated by Westernization. Given, tribal societies may be seen as under-developed. This leads to the opening of tribal lands to tourism. Others may trade their locally grown goods to the nearest

municipality market (Panda.org). This causes many Indigenous members to lose sight of cultural importance.

To European colonizers, “domination” may seem like an overstatement. However, tangibility established strong correlations between property and wealth. Through the Western lens, a theory developed claiming Indigenous people failed to improve their homelands as they did not make much use of available resources. On the contrary, tribes like the Yanomami established sustainable systems for agriculture such as slash-and-burn. This practice was controlled and limited, affecting only small areas and later influenced modernization. For development purposes, outsiders mirrored the slashing and burning of the forest. Unfortunately, these fires were not controllable like the Yanomami’s, destroying many homelands for many Indigenous people in the Amazon (Choi, 2018).

The Yanomami Tribe

The word '*Yanomami*' means Human Being. The Yanomami people live in the Amazon rainforests. There are around 24,000 of them and they live in small groups in huge huts named *malocas* or *yanos*. Every few years they move their villages to somewhere new.

[Read more about this amazing people...](#)

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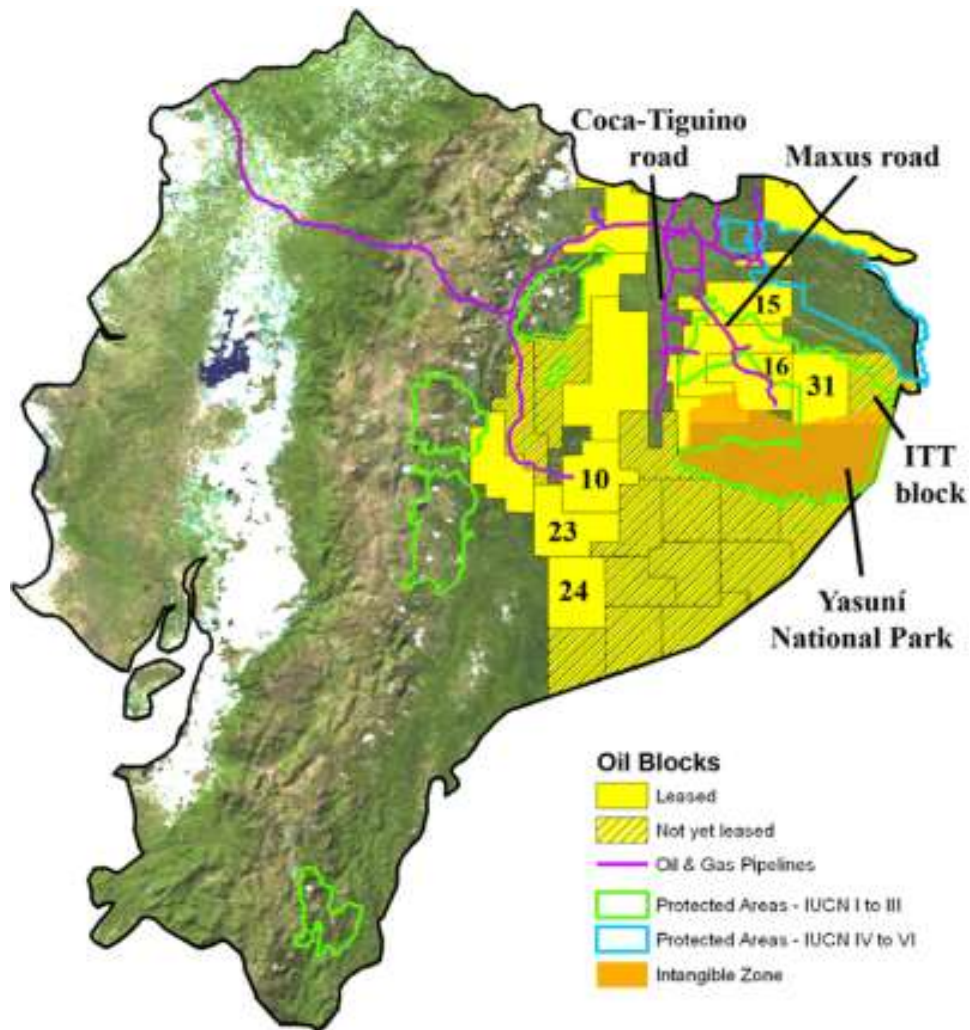
Yanomami Tribe

The Yanomami tribe is indigenous and is made each have their own language. The names of tl

Indigenous Amazonians are challenged economically. “Even when they are able to accumulate human capital [i.e. education or training

opportunities], they are unable to convert that to significantly greater earnings or to reduce the poverty gap with the non-Indigenous population.” Discrimination and low quality of schooling for the Indigenous populations have resulted in earnings that average half of what non-Indigenous workers earn. In Columbia, thousands of Indigenous members have been displaced as a result of drug cultivation and trafficking in the Indigenous areas. This has led to increases in refugees in countries like Brazil, Ecuador, Panama, Peru, and Venezuela (United Nations Department of Public Information, 2010).

With Indigenous reserves generally sitting as hotspots for resource extraction due to purity of the lands (as shown below), the Indigenous people are most vulnerable to diminishing health effects. In Ecuador, cancer rates are most common among the Indigenous communities who live in oil extraction areas. The risk of throat cancer is an astonishing 30 times greater than the non-Indigenous populations. Similar comparisons include the rate of kidney and skin cancers at fifteen times greater and stomach cancer at five times greater (United Nations Department of Public Information, 2010).



It doesn't help that many Amazonian communities are treated with enslavement through debt-bondage systems run by rubber traders. The "Indians" work their entire lives without pay that outweighs their debts. In Columbia in the 1970's, they were even "deprived of basic human rights" as they labored along deforestation (Butler, 2020). This has continued to influence the decisions made by younger generations. Occidentalism has discouraged any traditional learning. Indigenous children and young adults see no purpose in reviving their language as English and Spanish have become dominant. Thus, the youth depart from the forests, resulting in lost knowledge of the Amazon rainforests (Butler, 2020).

In the late 1940's and early '50's, socioeconomic changes occurred in Tsimane' territory. These changes included proselytism for the Tsimane', where their traditional views were forced by government policy to change to Catholic and Protestant missions. In addition, established were cattle ranches and roads across the Tsimane' territory for the purpose of encouraging small stakeholders to move to rural areas, much like the Indigenous peoples. In the 1950's, the Bolivian Government ordered missionaries to serve as linguists to "lowland native Amazonian populations", educating them to become bilingual and to translate the bible (Rubio Jovel, K. V., Undurraga, E., Magvanjav, O., Gravlee, C., Huanca, T., Leonard, W. R., . . . T., 2009). The website shown provides quick facts about the Indigenous people of Bolivia and such history.

Indigenous peoples in Bolivia

There are 36 recognized peoples in Bolivia. With the adoption of the Law on the Rights of the Indigenous Peoples and a new Constitution, Bolivia became a name of plurinational state.

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Bolivia - IWGIA - International Work Group for Indigenous Affairs

Alas, upon Indigenous people of the Amazon being introduced to Western cultures, the astonishment of "Western foods, tools, clothes, and especially Spanish language religious schooling 'led to an

estrangement from their traditional forest life of hunting, gather, and slash-and-burn agriculture” (Grench, 2009).



Modern traditional representation

The Impact of COVID-19

Coronavirus Animation: High Impact
Demonstrates How COVID-19 Impacts
the Body

With the new threat of COVID, the way in which the Amazon is viewed, treated, and its ability to be protected is changing. Although the leaders of the countries who share parts of the Amazon have the most control over how it is utilized, it has been observed that the Indigenous tribes living within the Amazon are actually some of the best caretakers. Their traditional knowledge and cultural beliefs make them proponents of sustainable usage of the Amazon’s resources. For example, traditional rubber tappers were able to harvest the sap of the rubber trees without killing them, and Indigenous methods of agriculture were much more sustainable and were able to use plots of land for much longer due to crop rotation. Their management strategies have decreased the threat of fires, increased the harvest of particular

fruits, and allowed for management strategies of increasing biological diversity.



Traditional rubber tapping



Amazon deforestation

COVID-19 is rampant throughout the Amazon. The lives of Indigenous people are being lost at an increasingly alarming number. Since most Indigenous people are far away from any modern medical facilities, many of them have relied on Indigenous plants as medicine for their symptoms, and those who do make the long trip to receive modern medical care often find that there are not enough beds and ventilators for them. This has created a disproportionately high death rate within the Indigenous populations. Due to this high death rate, there will be fewer Indigenous people acting as stewards of the Amazon, putting this rainforest at an even greater risk of being exploited by the leaders of the Amazonian countries.



Traditional medicinal practices

Another problem has occurred along with COVID and that is the increase of gold mining in the Amazon. Although this pandemic has caused the decrease in value of many metals, gold is the exception. Its prices have actually increased, therefore incentivizing many gold mining companies located in the Amazon to increase their output. This not only affects the integrity of the Amazon, but puts the Indigenous people at further risk of infection due to their heavy involvement in the mining process. Even though there have been a few initiatives put in place to keep the spread of COVID away from the mines, Bolsanaro is making it difficult for these to be effective since he is placing the output of the mines ahead of the safety of the miners.



Illegal gold mining activities in the Amazon

What is happening to the Indigenous communities today mirrors what occurred when the European colonizers first arrived in South America. The spread of disease is rampant, gold mining and resource exploitation is viewed as the right of the countries, and thousands of deaths are occurring within the Indigenous communities. Despite the resilience of these people and their commitment to preventing illegal logging, mining, and hunting, if trends continue to follow this path, the decreasing numbers of Indigenous populations will lead to even more deforestation in the Amazon rainforest.



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