

# The Effects of Climate Change on Biodiversity and Impacts to Indigenous Peoples in the Amazon



A member of the Yuqui tribe cutting down the rainforest to make room for cultivating banana trees & corn.

## ABSTRACT

The purpose of this research is to identify the problems associated with climate change that have negatively affected the biodiversity of the Amazon. The progression of climate change, due to green house gasses, has impacted the land within the Amazon and also the biodiversity of many species immensely. The natural resources that numerous native indigenous groups depend on are being disrupted, and the rights to the land and territories are changing along with their cultures. From these disturbances, poverty has risen and made things more difficult for many of the indigenous peoples' way of life. Upon completion of my research, I found that there were several contributing factors in the declining of biodiversity, which include the diminishing of natural resources, food sovereignty uncertainty, stresses within traditional knowledge and culture, and unsure land rights.

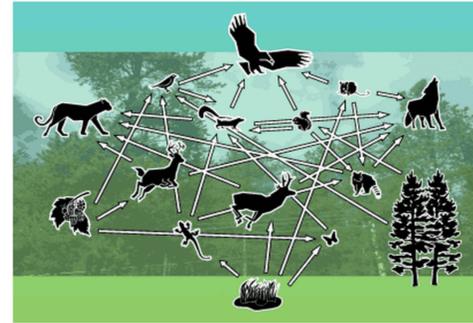
“Far from being a place of ‘homogenous complexity’ – a biome rich in species but with a predictable ‘evenness’ over the landscape- the Neotropical forest is better described as exhibiting constant variation in time and space.” (Stearmen 213)

## Background

The context for my research is **specific to the Amazon rainforest** and the different indigenous peoples who inhabit it. Focusing on tribes that have had large adverse effects on their biodiversity from climate change and are stressed for environmental justice. Some territories are isolated like the **Yukana & Yanomamai tribes**, whereas other continuous territories have one or more frontiers, like the **Akawaio** and the **Piapoco** territories along rivers. Substantial flooding and displacement has happened in areas, such as Colombia and North coastal Peru, due to increased temperate.

**Ecological diversity** is another very important aspect of my research, which entails a variety of biology within the Amazon. The **Yuqui tribe** is very linked with their land to which has had climate change disturbances like windstorms and river problems, that make foraging and working with the land unfeasible. Also, the dry season makes the water increasingly shallow and heated which **creates stress** for the Yuqui's fish hunting efforts, along with numerous other indigenous peoples.

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A main food chain in the Amazon rainforest



The Amazon River is the widest in the world reaching 25 mi (40 km) wide.



The Amazon rivers delta connects to the Atlantic Ocean, right near the equator.



The arapaima is a genus of bonytongue native to the Amazon River in Brazil. They are the largest freshwater fish of South America.



A young Kayapo girl takes an afternoon bath in the Xingu River. (Photograph courtesy Cristina Mittermeier/International League of Conservation Photographers.)

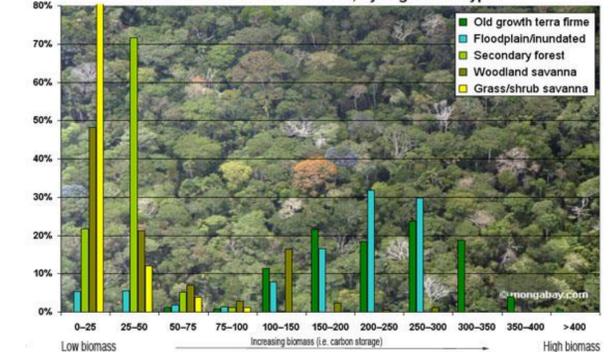
“ This land keeps us together within its mountains- we come to understand that we are not just a few people or separate villages but one people belonging to the homeland.”- the Akawaio (Survival Nation)

## Hypothesis & Approach

If climate change keeps increasing at its current rate, then the biodiversity of the amazon will continue to be stressed, negatively affecting the indigenous peoples way of life.

Using the classical approach, I analyzed different readings and statistics to make inferences about the Amazons biodiversity mainly focusing on how climate change has decreased food and animal species populations. Fish, being a keystone species for the Yuqui, was an important type of species to examine within the Amazon.

Amazon biomass distribution, by vegetation type



## Conclusions

My inferences on the biodiversity of the Amazon are simple, in that the biomass is too low for a recovery right now and that climate change has made negative alternations to the land so the native species and plants can't adapt and habit well. The livelihood of the indigenous people will continue to be stressed until future sustainable plans are implemented within the tribes and areas where they live.

## Future Decisions

The forthcoming success of countries, such as Colombia, need to safeguard the Amazon rainforest and accomplish socio-ecological sustainability, while contributing to mitigation and adaption measures of climate change. This will depend on protecting bio culture diversity and conserving the rainforest. Focusing on environmental justice is a must, this will promote fair treatment and equality within the tribes, along with achieving titles as recognized indigenous groups and tribes.