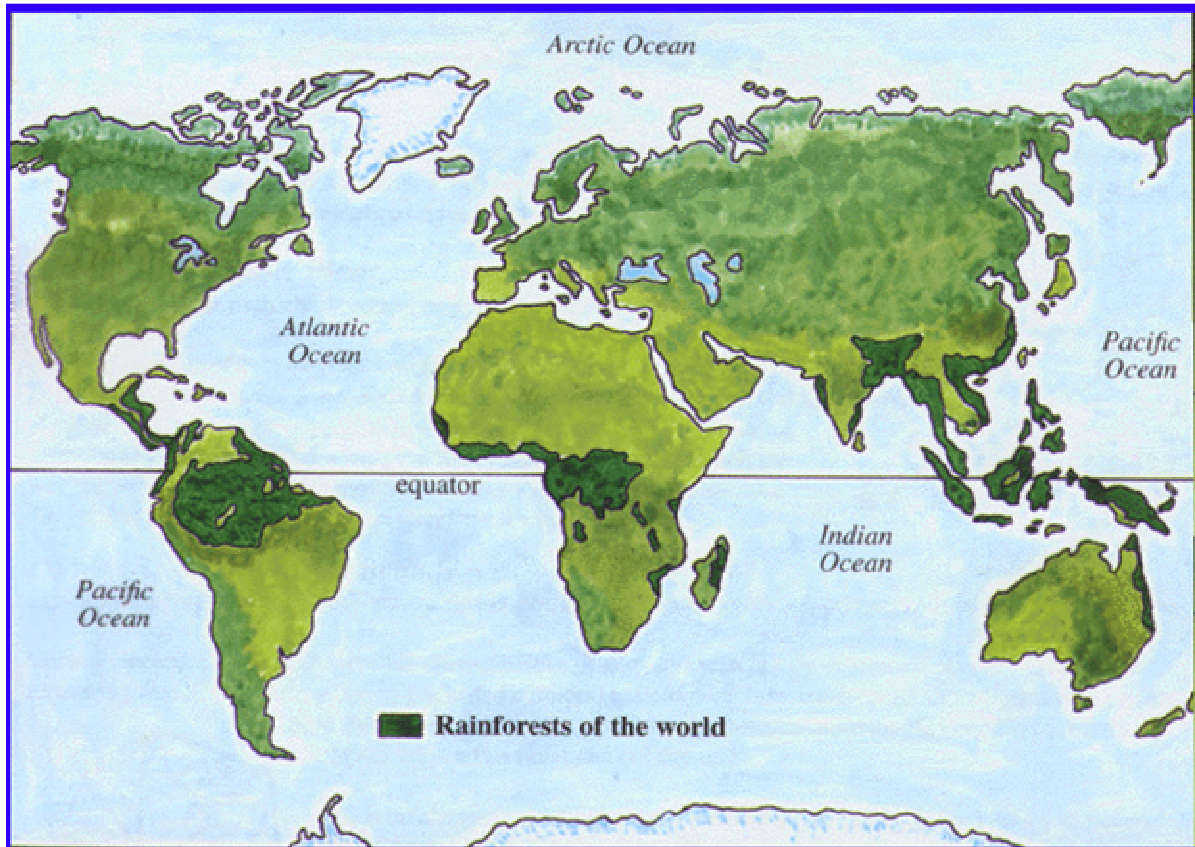


The Amazonian rainforest is the world's largest rainforest situated in Brazil of South America and consequently suffers the most deforestation in the world. It is home to about 20 million people, as well as approximately 60,000 plant species, 1,000 bird species and more than 300 mammal species. This rainforest area, also known as **Amazonia**, the **Amazon jungle**, or the **Amazon Basin**, encompasses seven million square kilometers (1.7 billion acres), in which it's located within nine nations: Brazil (with 60 percent of the rainforest), Peru (with 13 percent of the rainforest), Colombia, Venezuela, Ecuador, Bolivia, Guyana, Suriname, and French Guiana. The Amazon represents over half of the planet's remaining rainforests and comprises the largest and most species-rich area of tropical rainforest in the world; implementing the label of the most diverse ecosystem in the world.



Rainforests are found in more than forty countries around the equator. Most of the rainforests are located in the tropics; which is from the Tropic of Capricorn, south of the equator, to the Tropic of Cancer, which is north of the equator. These rainforests can be found in parts of Brazil, Venezuela, the Amazon Basin, Zaire, Indonesia, the Neotropics in Brazil, Cherrapunki in India, Colombia, French Guinea, Ecuador, Peru, Bolivia, Southeast Asia, Suriname, Douala in Cameroon, Costa Rica, New Guinea, the Philippines, Kenya, Borneo, Madagascar, Trinidad, Thailand, Australia, and Belize – to name several examples. This is due to the yearly hot weather complimented with the wet humid climate – ideal for plants all of species to thrive.

The various trees and vegetation in the Amazonian rainforest (*diagram above*) are structured in this way as of competition. They compete mainly for sunlight; in which the emergent trees receive the most, whilst protecting the smaller vegetation from fierce winds and rain.

Summary:

The Amazon River Basin is home to the largest rainforest on Earth. The basin, roughly the size of the forty-eight contiguous United States, covers some 40% of the South American continent. It is only renowned as one of the wettest place on earth which inhibits over 50% of all the plants and animals in the world.

Opposed from other numerous environmental conditions as well as past human influence; Amazonia is made up of a variety of ecosystems and vegetation types including rainforests, seasonal forests, deciduous forests, flooded forests, and savannas.

It is extremely important for the allowance of the Amazonian rainforest to survive and be able to thrive.

Climate:

The rainforest climate is hot, wet and sticky - very humid; so consequently it rains at roughly a set period of the day, every day. The rain comes down suddenly and stops just as suddenly. Which is renowned as convectional rainfall; meaning that the Sun heats the ground, which heats the air nearest the ground causing it to expand and rise. When the air gets to a certain height it condenses to dew point and forms clouds, then it rains with often occurrences of storms and thunder. 'Amazonia is truly a unique and diverse place, there is no place quite like it left in the world.'

There's a constant year round temperature of 80 degrees Fahrenheit and receive anywhere from 160-400 inches of rain a year. Scientists believe it was these properties that protected the Rainforest during the mass extinction of the Dinosaurs 65 million years ago. The Amazon jungle is also of a great significance to the climate of the world because it absorbs very large amounts of carbon dioxide present in the atmosphere – essential in preventing the recent phenomenon of global warming.

Ecosystem:

It would be expected that such a diverse ecosystem, humid and hot temperatures, would have rich soil – but this is not the case. In fact the nutrient quality of the soil is extremely poor. The 80% of the Rainforest nutrients is held within the plants and leaves themselves. Therefore, all plants and trees have very short roots which are close to the surface – as deciduous trees drop their leaves eventually which decompose - with only the thinner roots are sent down through the rocks; as all the nutrients in the soil have simply been washed away. Other elements which create some necessary nutrients which is key to any vegetations survival are; fallen trees which take 'an age' to decompose without the help of termites, and fungi on all types of trees. According to scientists the Amazonian rainforest is over millions of years old – the world's oldest and noted as the only 'original' rainforest left, flourishing from the ages as far back as the dinosaurs. There are approximately 900 tones of plant matter in 1 hectare of the 688 million hectored rainforest, which helps contribute over 20% of the world's oxygen supply, which is imperative for the survival of humans and all other living creatures a kind.

Animals:

There are an estimated 15,000 different kinds of Brazilian animals situated in the Amazonian rainforest. With over one third of the world's population of animals, notably 'exotic animals' which can only live in hotter and humid climates, endangering these animals from such acts as deforestation will only strain the Earths natural characteristics – food chains could be destroyed leading to a mass number of other extinct animals, nothing could be done by us to bring these animals back. Though preserving the complex beauty of nature is important. The animals, plants and the elements of the world form a tight and delicate ecological balance.

Medicines:

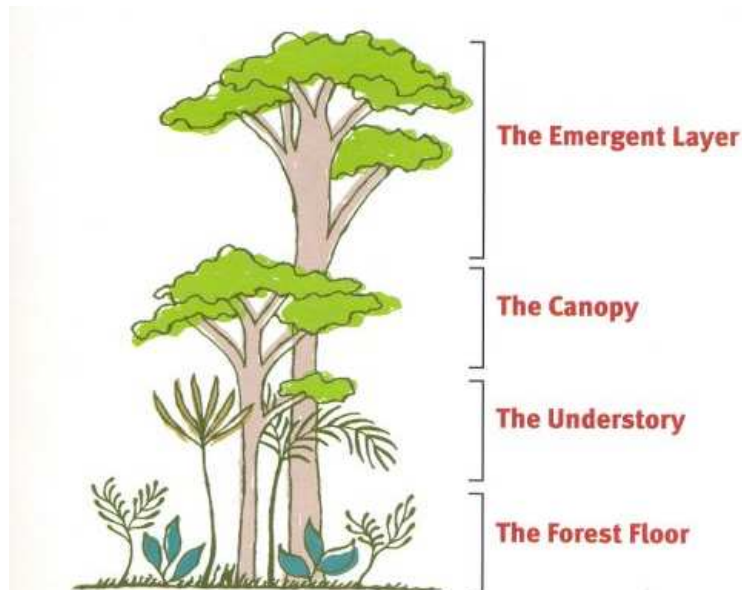
The Amazonian rainforest has many different plants that can be used as herbal medicines. Some of the most important medicines come from the Amazon where some have been used for hundreds and hundreds of years. These plants can be deadly if taken in large doses, but in small doses they can be very helpful. They can be used to cure headaches, skin irritation, high blood pressures, and many other diseases. Therefore, destroying the rainforest is like destroying the hope of any cures of deadly illnesses and diseases. Could cancer really be cured? The Amazonian rainforest is the only place that can answer that common question.

Hydrological Cycle:

Increasing amounts of deforestation can reduce transpiration of moisture into the atmosphere, weakening water recycling and causing local climate drying. This results in a dramatic change in the ecosystem, as a consequence from a less humid rainforest; plants and animals of all species may die as there is no where they can migrate. Plus another problem of which the surface floor is substantially warming; destroying the original composition of the rainforest which can create global effects/disasters. Scientists have suggested that the rising problems of deforestation can cause changes in the North Atlantic and European storm tracks; producing considerable cooling in southern Europe and warming across parts of Asia in winter.

Indigenous People:

Indigenous, or native, people have lived in rainforests for many thousands of years which they still regard as their home. Indigenous people admire the forest which, until the present, has protected them from outsiders and given them everything they need to survive like their ancestors. They live in what is called a sustainable existence, meaning they use the land without doing harm to the plants and animals. Although indigenous people have lived on their lands for thousands of years, they don't actually own it, as they have not filed for 'ownership deeds' of the land and do not possess a 'title' with the Brazilian government. From once living alone from any other human interference, in harmony, the 'natives' natural knowledge of the rainforest has considerably changed as an act from deforestation (making their territories smaller). Indigenous groups are beginning to fight for their land at a last remorse; most often through peaceful demonstrations. Meaning they have to somehow interact with members of the Brazilian society who normally speak the common Portuguese language. But some of their actions may cause them to be arrested or even to lose their lives. But they know that if they take no action, their land and culture could be lost forever.



Natural resources:

Deforestation is the cause of destruction to the Amazonian rainforest, in which it is rapidly becoming the most reliable method for access to resources such as wood. The countries of Amazonia are poor, less developed countries that rely on the resources of the Amazon jungle to become richer, more developed countries. However, some people think that they can only do this by destroying the rainforest forever – but if they were to now, their profits would not be as great as foregone for a sustainable income like rubber trees etc. The trees of the rainforest can be sold for wood (timber). This timber is in great demand in economically developed countries like Britain, Japan and USA. Accordingly, as it is in great demand, there are many advantages as well as disadvantages of the deforestation of the trees in the Amazon; the countries become richer, but if all the trees were cut down now the world may witness a worldwide spread of devastation.

Mining tin ore is considered an easier trade to retrieve from its original state in Amazonia, compared to efforts in other mines across the world. The rainforest's earth does not consist of a hard rocky substance; thorough decades of weathering and scorching hot heat blasting the ground, the tin ore can be removed easily with a hose propelling water at a high pressure. The tradesmen extracting these substances have a relatively simple job afterwards – foraging through the rubble to find the ore in which they sell to wealthy businessmen and companies, usually from other countries. Mines eventually become bare of their natural resources, so no more tin ore can be obtained – they are regarded as useless and therefore abandoned. These mines don't contain any soil nutrients as they have been washed away, so vegetation doesn't grow back once again. Other mines are then setup in different areas.

As 'mining' for tin ore is a relatively simple process with high profits, especially compared to other local jobs like farming etc, more Brazilians are changing their occupation, so areas of the rainforest are being destroyed to be replaced with mines/quarries.

The rainforest also contains high traces and amounts of gold ore, which has a far higher value than tin. However, the gold mining exploration at this present time is relatively small so the amount of abandoned mines is close to none.

Locals:

Tribes/indigenous people -

There are still a lot of tribes that still remained 'untouched' in the Amazonian rainforest, continuing to do so up until the present day. The 'Yanomami' tribe is renowned as the up most largest and dominate tribe. Choosing to live in isolation, a distance figure from the rest of the world, many tribes are still undiscovered. Each tribe is marginally different from their culture to traditions but they all survive from living with the forest, a dominant but humble part of the ecosystem; living alongside nature without threatening any serious harm. But increasing concerns of the amount of forest cover left in the Brazil's sector of Amazonia is leaving the locals in jeopardy. Their way of life is changing due to the effects from deforestation – the way in which they live is meaning they have to adapt. Tribes have to defend their territory from tree loggers, but they will have to eventually move and find new homes; relocating to areas they've never seen before, away from the homes that their ancestors have lived in for hundreds of years.

Tribes are actually being imprisoned in the rainforest; never to have access to modern health care, or modern dentistry. They're denied a life span of anything longer than 30 or 40 years. No access to modern farming, and agricultural developments that would improve their lives substantially. Even though their habitat is decreasing in size their lack of knowledge from the outside world is restricting them to evolve, into a modern civilization.

National:

Resources –

Some natural resources in the rainforest can't be found in many places around the rest of the world. Mahogany trees for example. Various foreign companies attempt to secure the services of the local people to retrieve these resources. In a summary, these rare resources make Brazil an important country, which can possibly become more economically dominant; the huge country is obviously unique compared to any other, apprehending great potential. The indifferent climate and sheer amount of trees offer an easy income to the Brazilian civilization. Unfortunately, as wood (timber) is in a great demand all over the world and there still is over 3million km² of rainforest left, thriving with a variety of tree species, deforestation is a chronic phenomenon. In which it is true; if the entire rainforest were to be cut down now Brazil would be extremely wealthy, but the planet will suffer from a lack of oxygen, deprived of any more rare natural resources.

Brazil however, has an option of sustainable development in which the civilization can survive irrespectively, and the country as a whole can expand its economic structure. The Brazilian government has the ability to prevent deforestation and introduce sustainable regimes, like rubber tapping, so in the future the country will have a solid, wealthier foundation to continue develop.

Brazilian Doctors -

If the Amazonian rainforest were to be demolished completely, undiscovered medicines will be lost forever. The medicines that have already been extracted are important to the local doctors, as, they possess medication that can only be found in that region of the Earth – making it highly expensive. The medicines are vital for the human civilizations that inhabit Amazonia; their quality of life is low and difficult. Their lifestyles are based mainly on surviving in which they cannot receive basic health care as the government can't simply afford it.

The Brazilian doctors who posses these medicines are then able to farm these organic harvests, to sell to companies around the world. This proves the significance of the medicines, to the financial and economic structure and development of the country (not just the people who live there).

Conservationists -

The Amazonian rainforest is most diverse ecosystem on the planet; containing wildlife and vegetation only inhabited in the nine nations. Conservationists from MEDCs like the United States also live in the rainforest, but not on a permanent basis. As tourists themselves, most collect data on the 'jungles' bio-diverse nature for their own logic and knowledge in their spare time. They are continuously exploring new ways and ideas to protect the wildlife, so that the locals are capable of living alongside animals, in harmony. Therefore, the further amount of volunteers that participate in these projects, the more the popularity of trekking in the Amazonia grows.

Ecotourism, from mainly such conservationists, will then be able to offer the countries of the rainforest a sustainable income. In which the importance of preserving the rainforest increases from the tourists who've visited. This will undoubtedly offer jobs for the locals aswell; acting as guides or captains on boats, as examples, - developing the variation of employment in Amazonia (instead of cattle ranching or farming), just through the inquisitive conservationists, trying to save the wildlife.

Global:

Governments from other countries (scientists) -

Governments from other countries are pressuring Brazil in particular to put an end to deforestation - in a vain attempt to prevent global warming. The Brazilian government expects to receive 'donations' from other countries to help protect their area of rainforest. That's why they've established the 'Amazon Fund' earlier this year to promote sustainable use of Earth's largest rainforest.

Norway has pledged to contribute hundreds of millions of dollars per year to rainforest protection in an effort to slow greenhouse gas emissions that result from deforestation. But this has put Brazil under scrutiny as Norway's the only country to offer a substantial amount of money. Their government is criticized by some European countries, and America, for relying on donations rather than marketing mechanisms for avoiding deforestation. But these countries, along with the consumer's demands from around the world, buy a high proportion of the products produced from the rainforest, like wooden furniture. These are the key drivers of rainforest destruction in Brazil.

Therefore, the governments of other countries are only interested in the welfare of the rainforest for the future of the world's survival.

Doctors –

Doctors from around the world would benefit from researching various plants in Amazonia, some still remain undiscovered. Doctors from MEDCs, who had once visited the rainforest found that common diseases and illness, unlikely to be fatal, were easily cured from digesting some form of vegetation without any modification; for example, the milk cut open from a papaya fruit would help with indigestion.

Doctors, around the world, believe that there are 'locked' assortments of yet undiscovered medicines, (regulating plant and animal life that could enrich the health of humans). This theory stands as Amazonia is the richest area of diversity on the globe, with such a variation in forms of life, which have been there for hundreds of years. The forest plants are vital resources for the eradication of diseases; they hold the potential to cure such cancers and maybe diseases that will inflict mammals in the future. This is why the biggest of the 80% remaining rainforest areas in the world must be preserved intact, helping them all to flourish again. The future health and welfare of humanity may well be determined by the fate of these rainforests.

History: Approximately 7,000 medical compounds from Amazonia were examined, identified and prescribed to Americans in 1985 – their retail value was an estimated \$43 billion. Showing just how important the rainforest is, even over 20 years ago.

Environmentalists –

Environmentalists are organizations that are involved in issues relating to the protection of the natural world, in which they are against the harmful effects of industrialized societies. In this particular incident, it is that those who are against the developed civilizations that produce waste gases.

What is global warming?;

The ozone layer, full of greenhouse gases, acts as a protective layer from the sun's rays. It allows light and some heat into the Earth's atmosphere which is enough to warm the entire globe. But some heat bounces back against the ground, attempting to escape back into the atmosphere, which it would normally be able to do. But with more greenhouse gases to absorb the heat inside the Earth's global temperature increases.

The effects of global warming;

Carbon dioxide, a gas that vegetation (trees basically) respire and produce energy with their leaves from photosynthesis, causes 9-26% of the greenhouse gas effect which is notably the second highest of all the gases. Behind that of water vapour with 36-70% which cannot be controlled or altered by human activity, unlike the atmospheric concentrations of carbon dioxide which can be increased. This is why the amounts of carbon dioxide and the other greenhouse gases must be restricted to a minimum. As otherwise the heat of the Earth's atmosphere will lead to the melting of the ice caps; leading to global flooding. Moreover, without preserving the trees of Amazonia, and all over the world in fact, the amount of carbon dioxide in atmosphere will also lead to the heating of the Earth, causing the same devastating effect. Achieving the right balance of the amount of greenhouse gases in the atmosphere can only be altered by human activity. Consequently environmentalists try to address the public about the growing concerns of global warming, pressure governments to decrease the amount of CO₂ their countries produce and investigate how to prevent the ice caps from melting.