

## Deforestation of the Amazon rainforest

### GCSE Humanities Coursework

This essay will investigate the hypothesis (Statement) "Deforestation in the Amazon Rainforest is a major global issue that only the Brazilian government can solve " and whether the evidence or the arguments' support this hypothesis or not.

The Amazon rainforest is the largest of its kind on the earth. It is therefore also called the lungs of the earth (as the rainforest cuts down a major part of the total amount of the  $\text{CO}_2$  emissions). It is situated in 9 countries in South America with the most of it being in Brazil (60%) and the rest of it in Columbia, Peru, Venezuela, Ecuador, Bolivia, Guiana, Suriname and French Guiana. The rainforest encompasses an area of 1.2 billion acres which is equal to 7 million kilometres sq. Tropical rainforests are a very important ecosystem for the earth. Half of the world's species live and exist in the rainforest and this is very unique. The Amazon rainforest has a very large unexplored biodiversity which means that it may provide us with a lot of medicines and herbs for the future. There may be cures still to be found for diseases such as leukaemia.

The rainforest is environmentally important to us because it's like the earth's lungs as it absorbs a vast majority of the  $\text{CO}_2$  produced by the burning of fossil fuels such as oil, gas and coal and this  $\text{CO}_2$  (Carbon Dioxide) is absorbed and transformed into  $\text{O}_2$  (Oxygen). The climate is regulated by the process of transpiration which happens in plants, this process regulates the temperatures and it also controls the levels of humidity (amount of water vapour in the air) which means that when the air is not humid enough there will be more rapid transpiration and vice versa. The Amazonian rainforests store over half of the earth's rainwater. Without rainforests continually recycling huge quantities of water, feeding the rivers, lakes and irrigation systems, droughts would become more common, potentially leading to widespread famine and disease. Soil in the rainforests is very poor in nutrients as all the nutrients are stored in the vast number of trees and plants. The tree roots hold the soil together. The canopy protects this poor nutritious soil from heavy rains. When a tree dies and it falls to the forest floor it decays and all the nutrients are recycled. However if trees are removed from the forests then the nutrients and the rain protection from the canopy will be removed. Not to mention that the tree roots which were anchoring the soil will be removed as well. Left behind is unprotected dusty/sandy soil which is then washed away in heavy rains. This can then cause blockages and flood in lowland rivers and will also leave highland rivers dry.

The rainforests also provide a home for many indigenous people (tribes such as Kaiowa and Guarani) whom have been living peacefully in the rainforests for thousands of years. They depend on the rainforest for their food, shelter and medicines. When oil and logging come to remove huge areas of their forest they also bring diseases with them which the indigenous people have no immunisation against. Sometimes they are forced away from their homes to places they don't even know and they are even chances of them being killed in this process of moving to a different area. The Amazon rainforest has a very large unexplored bio diversity which means that it may provide us with a lot of medicines and herbs for the future. More than 25% of our modern medicines originate from tropical forest plants. We have so far only learnt have to use 1% of the total number of Amazonian plants, imagine what cures and medicines we could get from the other 99% of plants.

Source A suggests that there has been an increase in the amount of deaths by suicide in the Mato Grosso do Sul state. More than 348 indigenous people have committed suicide since 1986. Source A is an article from a Brazilian newspaper from June 2002. As it is from a newspaper its intended audience is the public (anyone who reads the paper). The source's purpose was to inform people about the problems indigenous people are facing living in the Amazon rainforest. It was written by a journalist working for the paper. The source is in no way biased as it just trying to communicate the truth and it is not debating anything, the newspaper just want to share information which some members of the public might not have known of. One problem with the source is however that it was written 5 years ago and a lot of changes could have occurred since then so the source is not that reliable. The source is also not verifiable as it does not state where the data and statistics came from. The source links to my hypothesis that deforestation is not just the Brazilian government's problem because the indigenous people affected by deforestation of the Amazon rainforest do not only live in Brazil, they live in Paraguay and Bolivia as well.

The way in which the Amazon rainforest is destroyed is very wasteful because huge chunks of the forest are removed. One method is using massive chains attached to bull dozers which then drive and tear apart the forest and leave nothing but innutritious soil behind (this method is mainly used for logging). Another method is the slash and burn method which consists of burning massive areas of the forest just to clear land (this method is used to clear land for new roads, mining, HEP stations, cattle ranching, small scale farming and large scale). They also sometimes flood huge areas to built dams.

The Amazon rainforest is being and has been destroyed by the building of new roads such as the B-230 motorway which runs through the forest and is 2,500 Km long as well as the B-010 motorway which also runs through the Amazon rainforest and it is 1,900 Km long.

The Amazon rainforest is also being destroyed since the 80's to open mines and building roads to connect them. The Amazon rainforest has been flooded and cleared to build dams and Hydro Electric Power stations, one dam called the balbina dam flooded 2,400 km<sup>2</sup> (920 square miles) of rainforest upon completion. Its reservoirs are responsible for emitting 23,750,000 tons of carbon dioxide and 140,000 tons of methane in only its first three years of operation. Huge forest areas are being transformed into huge fields for cattle ranching (60-70% of the deforestation of the Amazon rainforest is due to cattle ranching), this is as MNC's such as McDonald's from MEDC countries are producing their beef in Brazil because it's much cheaper for them to buy it and therefore they get more profit from selling it in restaurants (this has been going on since the 60's).

In Brazil forest land has much less value than land which is cleared or fields and that is why landlords (owners) cut and remove all the trees to turn their land into fields so that they can get more money from selling the land. Some land is bought for small scale farming (small scale agriculture) where there is a local farmer who supplies the surrounding villages and markets food. Whereas huge areas of land are also bought for large scale farming (Industrial agriculture). Where the entire dairy, poultry, fish, crops and live stock are supplied to super markets around the country.

Source S is an illustration from 1987. Source S shows a MEDC citizen who is eating a burger possibly from a MNC like McDonald's and the burger is shown to have trees from the tropical rainforest inside it. The purpose of this illustration is to show that people who eat burgers from McDonalds are responsible for eating away the Amazon rainforest. As the source is from 1987 it may have been outdated by now because of new measures and therefore this source may not be reliable, we also know that it was produced from a group or individual called Earth Mirth. The author's name suggests that he may be biased if he is from Green Peace or other environment groups. The source is also limited as it may suggest that MNC's are the only cause of deforestation. It is useful to my hypothesis because the source suggests that MNC's are to blame for deforestation and this in turn suggests that deforestation of the Amazon rainforest is not just the Brazilian government's problem.

Brazil has a mostly export oriented economy as well as a moderate free market. Brazil's GDP (Gross Domestic Product) is more than US\$ trillion (1,000,000,000,000 or a million million) which is the tenth highest in the world. But this measured in PPP (Purchasing Power Parity) is around US\$1.9 trillion which means Brazil has got the eight largest economy in the world. Brazil is still a developing country as more than half of Brazil is divided economically one side is very wealthy and the other not so wealthy. There is uneven development most of eastern Brazil more developed than the west. The most developed parts of Brazil are the South-East and the Central Western regions surrounding the South-East as well as some parts of the north east of Brazil and the South. Around 2.5(2-3) of the 5 regions of Brazil are fairly developed. The rest is mainly forest land with no sanitation facilities, electricity or

Central heating or any solid roads. The South-East has state of the art science and Commerce facilities and has good transport facilities and State of the Art Airports. The South-East is the most densely populated area of Brazil whereas the Amazonas and North region are quite the opposite.

The Brazilian government is trying to change all this and make every region of Brazil developed so that regions like the South-East become less so populated and so that they can cope with the rising population. To do this Brazil needs money and so they have been borrowing vast amounts from ME DC's such as the U.K, U.S, France, Germany and etc... Whom have been charging huge amounts of interest on these sums and Brazil needs to pay this debt back (economic pressure). Some of the pressures on the Brazilian government are social and economic. There are a percentage of people in Brazil who are poor peasants without any land or home and they have to live in favelas and have no electricity and no sanitation facilities (social). It sounds fair that Brazils wants to build their country but to pay back t his money they need to get it from somewhere and that is when the Rainforest comes in. As Brazil has huge debts they needed to get money quickly and the easiest way to do this is to allow deforestation and therefore this means cutting down the trees and getting money from logging, mining, cattle ranching, HEP schemes and the construction of factories. The deforestation and the pressure on the Brazilian government are strongly linked because if they didn't have any of the above mentioned pressures then they would need to cut down the forests. Brazil has been stating that they will cut down their emissions if developed countries start doing so first. Brazil has though the biggest percentage of ethanol powered cars in the world. Even though it may seem that the Brazilian government should be in control of what is happening in the rainforest they really are not as all the demand for the resources comes from the outside of brazil. The Brazilian government has no choice.

Deforestation is directly linked to world climate change and global warming. As the burning of forests releases carbon dioxide into the air this has caused a rise in world temperatures. The Amazon rainforest is 'described as the lungs of the earth' as it transforms carbon dioxide (a greenhouse gas) into oxygen. The Amazon rainforest pumps oxygen into the world atmosphere and it is the world's only defence against global warming and climate change. If global warming and climate change continues as it is doing then in a century or so **WE WILL ALL DIE**. Locally deforestation has alone killed off thousands of species of plants we once used to make medicines and the one's **we could use in the future too**. Deforestation destroys all the soil as it becomes defenceless against rain, soil erosion and soil fertilit y. The deforestation in the Amazon forest has changed the traditional way of life and culture for Amerindians (local tribes) whom then have been forced off their land to make way for new developments. The effects on people in developed countries and other countries are felt as temperature have risen and this h as increased the no of weather storms, tornados, hurricanes, flooding and typhoons. Even in the U.K there has been serious flooding and heavy rain in the summer of 2006. If plants are lost in Brazil medicines are lost in Britain .Whatever happens 6000 miles away in Brazil has its

effects on the people living in the U.K and everywhere else in the world ( **GLOBAL Warming**).

Environmental pressure groups such as green peace are campaigning to protect the environment by making the MNC's take corporate responsibility. Corporate responsibility is a concept where organisations consider the interests of society by taking responsibility for the impact of their activities on customers, suppliers, employees, shareholders, communities and other stakeholders, as well as the environment, in this case everything applies but mostly the environment and communities.

The Amazon rainforest does not only occupy Brazil but also Columbia, Peru, Venezuela, Ecuador, Bolivia, Guiana, Suriname and French Guiana. All these governments should form some sort of a committee in which each government donates money for the welfare of the rainforest. As Brazil is in debt, they need to pay back the money to MEDC's who gave Brazil a loan. The Brazilian has to use the Amazon rainforests resources as they do not have any other method of income which is money efficient and time efficient. The MEDC countries should cancel Brazil's debts so that Brazil get's revenue enough to invest in better ways of making money, ways that suit Brazil and the environment of the world. Brazil is cutting the Amazon forest because they need money to pay their debt but if their debt's are cancelled they would NOT need to cut the forest. MNC's should stop exploiting the rainforest for cheap labour and cattle ranching and should look elsewhere where there is a less effect on the environment. Other countries such as the US and the UK should try to regulate import from Brazil. The Brazilian government has been implementing new measure to reduce deforestation such as limiting the number of sites from where you can log mahogany to 13. The Brazilian government has created a new federal force to fight environmental crime, for which 3,000 new agents will be hired and will also train 1,500 staff currently in Brazil's environmental agencies. They are making the legal system tighter for land clearing offences and more people are getting convicted, they tackling down environmental crimes. The Brazilian government are not doing too much to reduce CO<sub>2</sub> emissions.

Deforestation is a global issue as everyone is involved in the import and export of resources from the Amazon rainforest. If the whole of the Brazilian rainforest get's destroyed in 30 years it will not just be the Brazilian government's problem it would affect everyone in the world as deforestation is proven to lead to global warming which is linked to climate change all over the world.

The rainforest can be conserved by the use of 'Sustainable Development'. Sustainable development in terms of the Amazon Rainforest is when everyone makes use of the rainforest's resources in a way that does not harm or damage the rainforest, this in turn reduces waste. One step to take is to protect and manage the

remaining forests; this could be done by making some areas protected and some areas suitable for logging, farming, quarrying or building.

Another step would be to invest money into helping people's quality of life; this can be done by looking for alternative and efficient ways of farming. The forest is cleared by fire and bulldozers right now because it is cheaper. The forest should however in the future be cleared carefully by only cutting necessary and useful trees and not damaging the habitat at the same time. There should also be an increase in the re-planting of trees. If the forest is cleared in an expensive but careful way, then it will cost a lot in the short term but then the forest would stay healthy and it will keep on providing resources such as timber, cocoa, coffee, rubber and herbal medicine in better quality and that would in turn increase profits by a larger margin compared to the income from cattle ranching and cereals.

Finally, the last step would be to make international groups and governments work together to conserve the rainforest. This would help setting limits on certain types of resources such as mahogany. More money should also be invested into research of ways to help the forest survive. We should also invest into new technologies and ways of making energy as an alternative to fossil fuels and nuclear power. Brazil has designated some areas for logging and some areas protected from logging. But much more should be done.

Source D is an article from the Reuters Press Agency from June 2001. The source suggests that a survey conducted by the WWF shows that the majority of people conducted in the survey wanted the increased use of sustainable development without more deforestation. The poll also suggested that the Amazon rainforest is the Top Priority. The source states that "only the army thought the forests were not the main economic resource of the Amazon. It gave more importance to minerals and the potential for hydroelectric power generation in the area." This means that everyone thought of the Amazon rainforest being the main resource except for the army. The army's thoughts may have been influenced by the fact that they did not want to talk negative about their country, so they may have given an unreliable opinion.

Source D's purpose is to share information so it hasn't got a objective, this in turn makes source D reliable as its content may not have been influenced by its purpose. However the survey was conducted by WWF whom are an environmental group and so therefore the source may be biased and in turn unreliable as the WWF may want influence people by saying that everyone thinks the Amazon rainforest is Brazil's main resource except for the army and possibly the government. The source is not completely verifiable as its original source of information is not clearly given and it would be very hard to find the survey. The source is also very limited as it does not give the actual figures and statistics of the survey and it doesn't tell us how many people were asked? And who? .The source is however not that useful to my hypothesis as it doesn't talk about other government's or why the rainforest problem is only Brazil's. So the source is not of much value to me.

To conclude I have reached the conclusion that the hypothesis "Deforestation of the Amazon rainforest is a major global environmental issue that only the Brazilian government can solve" is wrong and that I go against it. As the Amazon is a major global issue it means that everyone is affected by it, hence not a lot of countries are taking important and significant decisions. The Amazon is situated in 9 countries then why should Brazil be the only country able to solve the deforestation. The forest is being cleared as Brazil need money from the clearing of land, logging, mining and cattle-ranching. Nearly all the debt Brazil has is because of the money borrowed from MEDC's such as the US, UK, France and Germany etc... Brazil's debt should be cancelled, so that they can ban all deforestation forever. Nearly half of Brazil's GDP is going to debt instalments to MEDC's and if they don't have to pay debt then they can invest and research into other ways of making money, Brazil could be an ideal place for Solar powered energy and electricity as there is a lot of sunshine there.

All the countries that have a part of the rain forest should together form a rainforest alliance; this alliance could then help care for the rainforest and help research into new medicines and technology from the rainforest's resources. We all don't want to die just because we wanted all our furniture to make out of mahogany. We all want to stop global warming and its time that governments seriously have a MAJOR rethink. Governments should not just decrease their Co2 by 10% it should be 40 - 60%. The earth has been turned into a death -trap, if we destroy the rainforest we will all die because of global warming, if we use Nuclear power instead of fossil fuels for power and electricity then we would be at risk from dying from radioactivity. We should all invest in much more renewable energy such as solar power and wind and also new forms of energy. The earth main defence against global warming is the Amazon rainforest, then why destroy it? At what price are we destroying the forest, is it the price of life? <<<<< (Global Warming caused by the destruction of the rainforest and other Co2 emissions).

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