

# Geography Task

**To understand the threats that humans bring to the rainforest through deforestation.**



In this picture you can see an area of the forest which has been cut down and cleared. This is also known as 'deforestation'. Deforestation means the clearing of large areas of forest lands which are never re-planted.

In this photo you can see a process known as 'slash and burn'. Trees are cut down and the land is burnt in order to clear it to grow crops such as soya. However, the biggest cause of deforestation in the Amazon is cattle ranching. If you went to the Amazon today, you would find millions of cattle grazing on the land. Brazil is now the world's largest exporter of beef.



**Your task is to research deforestation (use the following pages for this) and to create a persuasive piece to make others aware of the damage humans are causing to our rainforests.**

You have a choice of what form this persuasive piece could take.

You could:

- Create a persuasive leaflet
- Write a persuasive speech
- Write a radio interview between a presenter and an expert

Whichever form you choose, make sure you use a range of facts and figures from your research and that you use different persuasive techniques.

**You must include a range of persuasive techniques, such as:**

Facts and figures  
Alliteration  
Rhetorical Questions  
Emotive language  
Repetition for effect

## Causes of deforestation

### Logging

Commercial logging companies cut down trees for timber, which is mostly sold to developed countries. In most cases, large areas of forest are destroyed just to remove a few highly valued trees. The effect of this devastation has lasting consequences:

- heavy machinery compacts soil and makes it more vulnerable to erosion
- silt is washed into rivers
- logging roads open up the area to new settlers who remove even more trees

### Farming

Land is cleared (eg by slash and burn) and planted with cash crops, usually just one - such as palm oil. Alternatively, it will be used for grazing by cattle ranchers. Most cash crops and cattle are eventually sold to developed countries.

These actions affect the soil for future use because fertility falls after just a few years. Only farmers who can afford fertilisers will be able to use the soil to grow crops in the future. If they can't afford fertilisers, farmers simply move on and clear more land, so more forest is lost.



### Mining

Land is completely deforested. Soil is often removed with high-pressure hoses and chemicals are used. The run-off goes into local rivers and pollutes them. Huge scars from open-cast pits are left - the soil can't recover.

### Road building

Loggers and miners build roads to get their materials out. People use the roads to enter the forest and build new settlements and set up industries. The Trans-Amazonian Highway in South America is 5,300 km long and has opened up some remote parts of Brazil to development.

### Settlement

Land is being cleared for new homes and settlements. There is more need for these in countries with increasing populations, especially around large overcrowded cities.

### Dam building

- Hydro-electric dams provide energy but also result in deforestation. Problems include:
- flooding of large areas of forest
- people may have to move
- drowned forest rots and adds carbon to the atmosphere
- Fuelwood
- Many people rely on wood for their main source of fuel, particularly in developing countries. As the population grows, more wood is chopped down.

## Problems caused by deforestation

- Less plant and animal species - biodiversity.
- Loss of habitats - places for animals to live.
- Loss of sources of medicine.
- Soil erosion.
- Loss of soil nutrients.
- Silting-up of rivers.
- Flooding.
- Global warming and rising sea levels - burning trees releases greenhouse gases which add to global warming. Trees take in carbon dioxide and reduce the effects of global warming.

## What can be done to protect tropical forests?

- Selective logging - only some trees cut down.
- Using elephants, horses or helicopters to drag or fly selected logs out.
- Replanting trees.
- Environmental laws which make logging illegal, though this is hard to police.
- Setting up national parks and nature reserves.
- Encouraging ecotourism.
- Encourage people to stop buying tropical hardwood.
- Helping poorer countries develop - so they don't have to use rainforest resources unsustainably.



## Deforestation Facts

- One and one-half acres of rainforest are lost every second.
- 13 million hectares of forest have been cleared for other uses or by natural disaster. By the year 2030, we might only have 10% of our forests left... and if we don't stop deforestation, they could all be gone in 100 years.
- Nearly half of the world's species of plants, animals and micro-organisms will be destroyed or severely threatened over the next quarter century due to rainforest deforestation.
- Experts estimates that we are losing 137 plant, animal and insect species every single day due to rainforest deforestation. That equates to 50,000 species a year. As the rainforest species disappear, so do many possible cures for life-threatening diseases. Currently, 121 prescription drugs sold worldwide come from plant-derived sources. While 25% of Western pharmaceuticals are derived from rainforest ingredients, less than 1% of these tropical trees and plants have been tested by scientists.
- Most rainforests are cleared by chainsaws, bulldozers and fires for its timber value and then are followed by farming and ranching operations, even by world giants like Mitsubishi Corporation, Georgia Pacific, Texaco and Unocal.



- There were an estimated ten million Indians living in the Amazonian Rainforest five centuries ago. Today there are less than 200,000.
- In Brazil alone, European colonists have destroyed more than 90 indigenous tribes since the 1900's. With them have gone centuries of accumulated knowledge of the medicinal value of rainforest species. As their homelands continue to be destroyed by deforestation, rainforest peoples are also disappearing.

### **Why are Rainforests Important?**

- They are home to plants and animals. It took 60 to 100 million years for Rainforests to evolve and it is the home of over 30 million species of plants and animals. When we clear the forests, they all die.
- Trees help absorb the harmful carbon dioxide that we humans release in the atmosphere and they provide the oxygen that we need to breathe. More: Temperature Changes due to Global Warming
- More than 25% of our medicines today come from rainforest plants. We have only explored 1% of the plants available. Just imagine what diseases the 99% that have not been explored can cure!
- They soak up a lot of rainfall. The rainwater is filtered through the forest floors and supplies water to rivers and irrigation systems. They also help prevent erosion, where the soil is washed away causing blockages that in turn causes floods.
- They are home to indigenous people. Many tribes still live in the rainforests.

