

5.6 Why are rainforests disappearing?

Rainforests have the potential to provide a wide variety of useful resources. The temptation to use these pristine areas is often too difficult for people to resist, especially if they live in poverty. As a result, all around the world, rainforests are being destroyed for economic gain. The main reasons for rainforests being cleared are described below.

Figure 1 Causes of deforestation in the Amazon 2000–2005

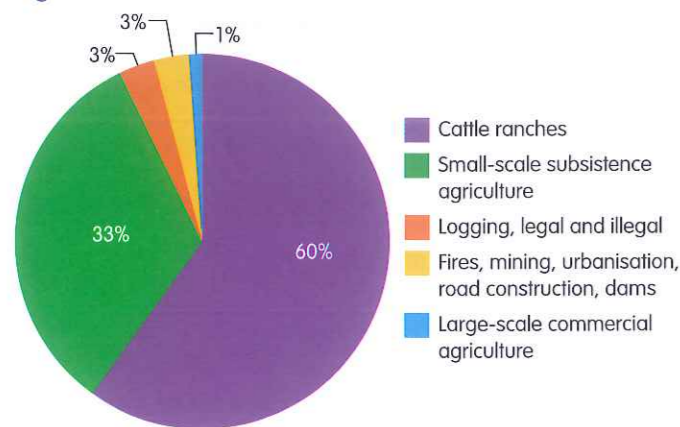


Figure 2 It is thought that up to 70 per cent of logging in Brazil and Indonesia could be illegal.



Commercial logging

There are two main types of logging: **clearfelling** and **selective logging**. When a forest is clearfelled, all trees are removed either by chainsaw or with heavy machinery such as bulldozers. In selective logging, only the best and most valuable trees are cut down. But in clearing forest to reach those trees, it is estimated that a hectare (10 000 square metres) of forest is destroyed for each log removed.

Farming

Rainforests grow in many developing countries. These countries struggle to provide the basic necessities of life for their people, and their populations are often rapidly increasing in size. In these countries, the land on which the forest grows is seen as more valuable than the forest itself.

Highways create access to these areas, opening up parts of the rainforest once almost impossible to reach. Soon after the roads are built, settlers (called homesteaders) arrive. Claiming a piece of the forest that

borders the road, the homesteaders chop down a few trees as timber for fencing or a house, and then set fire to the rest.

Once the initial 'land rush' is over and all the land beside the roads has been claimed, tracks and roads leading from the highways will push deeper and deeper into the forest. Soon an area of 50 kilometres either side of the highway will have been destroyed and replaced by small farms or large-scale commercial farms that raise beef or crops for export to the richer countries of the world.

Figure 3 Blocks of rainforest in Peru burned to clear the area for agricultural use — here, maize seedlings have been planted in the clearing.



Mining

Many rainforests are growing on land that also contains large energy and mineral deposits such as oil, gold, silver, bauxite, iron ore, copper and zinc. Mineral companies build roads to the deposits and set up large-scale mining and processing plants. These plants require large amounts of electricity, and this is often supplied by burning trees to create charcoal or by constructing vast **hydroelectric dams**.

Figure 4 The Ok Tedi gold and copper mine in the Papua New Guinea rainforest. The damage that mining has caused to the surrounding forest environment can be clearly seen.



Deep in the Brazilian rainforest, a 2000-square-kilometre dam has been constructed to provide electricity for aluminium smelters. The dam flooded the entire tribal lands of two native peoples, and is so large that it has altered the climate in the area, making it drier.

Another problem created by mining is the pollution of nearby rivers and streams from chemicals used in the processing plants. Rivers downstream from a vast goldmine in Papua New Guinea have been found to contain four times the safe limit of cyanide in the water. Cyanide is used to extract gold from rock.

Activities

REMEMBER

- 1 What is the difference between clearfelling and selective logging?
- 2 List four *changes*/problems caused by mining operations in rainforests.

EXPLAIN

- 3 'Many homesteaders are unable to make a good living from the poor tropical soils.' Explain the reasoning behind this statement. You may like to revisit section 5.2 to help you with your response.

DISCOVER

- 4 Refer to figure 1. What percentage of deforestation is caused by agriculture in the Amazon?
- 5 Using the internet, research any economic activities that are supported by Australian rainforests.

PREDICT

- 6 As a class, discuss the potential long-term problems that could result from the continued commercial use of rainforest *environments* around the world. Develop a list of the top five potential problems.

THINK

- 7 Many rainforest *environments* are located in developing countries. Why does this make the problem of rainforest destruction harder to solve?
- 8 Mining companies insist that mining in poorer countries brings benefits to the local community. Re-read section 5.5 in your eBookPLUS on the Huli people of Papua New Guinea, and outline some of the benefits that mining could bring to these people. Then outline any problems that mining could cause for the Huli people. What conclusions can you reach?

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clearfelling a forestry practice in which most or all trees and forested areas are cut down

hydroelectric dam a dam that harnesses the energy of falling or flowing water to generate electricity

selective logging a forestry practice in which only selected trees are cut down