

Springboard

into
Comprehension

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Explanation

Rainforests at

RISK

Written by Susie Brown

Rainforests at

RISK

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Rainforests

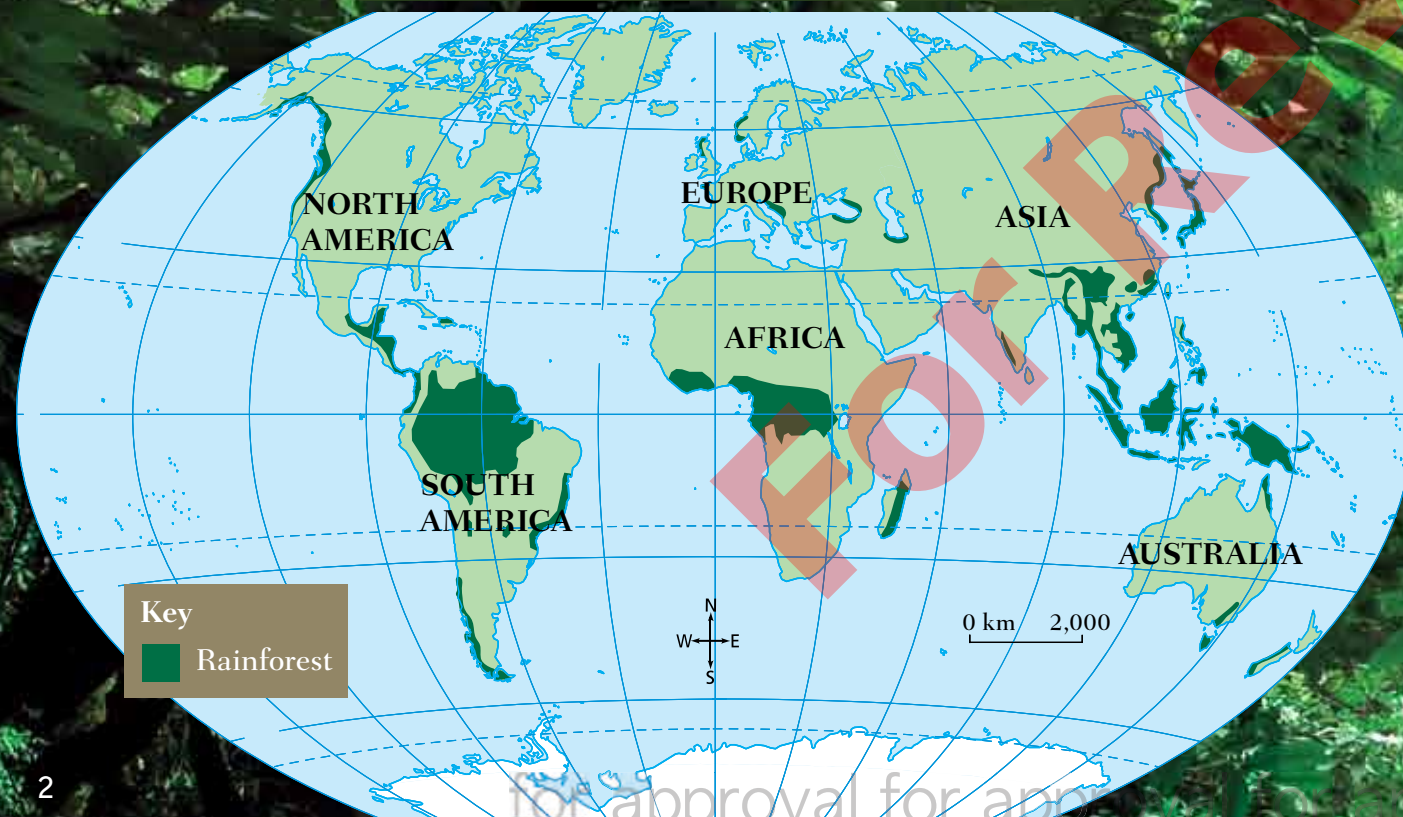
Rainforests are areas of lush, dense forest. They are located all over the world, typically in places that have consistently heavy rainfall. Rainforests have an incredibly wide variety of plant and animal life, called **biodiversity**.

Unfortunately, the world's rainforests are shrinking rapidly. Rainforests once covered approximately 14 per cent of the surface of Earth. Today, they cover 6 per cent or less. Scientists believe that about 300,000 square km of rainforest are lost each year. That is an area larger than the size of New Zealand. This means that if rainforests continue to shrink at this rate, they could be lost entirely within 100 years.



A mountain gorilla in a rainforest in Uganda

Rainforests around the World



Causes of Deforestation

When part of a rainforest is **destroyed**, the environment around it is changed forever. Rainforests are home to more than half of the world's species of plants and animals. This incredible biodiversity is under great threat. In fact, experts have estimated that with deforestation, 137 of these species are already being lost every day. This equals about 50,000 species a year.

Many of these trees are cut down for timber. However, the destruction of the world's rainforest areas happens for many other reasons as well.

Reasons for Rainforest Deforestation



Logging

Logging is one of the major causes of rainforest destruction. Wood for furniture, flooring, and building construction is harvested from rainforests. When trees are removed, attached plant life is also destroyed. Large holes are left in the rainforest canopy that take hundreds of years to regenerate.

Logging requires heavy machinery, which in turn requires the building of roads. Once the trees are cut down, the soil is compacted by the heavy machinery, making regrowth impossible. Without regrowth, soil is swept away by wind and washed away in heavy rains, causing **soil erosion**. The material removed by soil erosion blocks rivers and streams with fine layers of clay or sand. This, in turn, disrupts the habitats of hundreds of birds and animals.

This aerial view shows the clearing of the Amazon Rainforest in Brazil.



Forest clearing contributes to soil erosion, as seen in this rainforest in Malaysia.



What Can Be Done?

Conservation programs in different parts of the world encourage a less damaging method of logging. This is known as strip logging. With this method, only a **small strip** of rainforest is logged. Consequently, a gap is produced that **is narrow enough** to allow plants and seeds to quickly regrow.

Great Bear Rainforest

The Great Bear Rainforest in British Columbia, Canada, is one of the largest rainforests in the world that is not in the tropics. Three environmental groups have worked with the government since 2006 to put a stop to excessive logging there. As a result, 21,000 square km of rainforest are now protected against logging. A new system called “lighter touch logging” has been introduced. This allows for regrowth and protects a further 7,000 square km. Financial programs have also been established to encourage alternatives to logging. As a result, the Great Bear Rainforest is now one of the most protected forest regions in the world.

The results of clearcut logging in Great Bear Rainforest



Great Bear Rainforest



Key

- Great Bear Rainforest
- Canada
- United States

Resources for Other Industries

Between 1980 and 2000, the world's population grew by 30 per cent. The economy tripled in size. Because of this rapid growth, the demand on resources has exploded. This is putting pressure on the systems of plants, animals, and bacteria interacting with each other and their environment, the **ecosystems**. More people means more demand for fuelwood and also for paper. Much of the rainforest is being cut down to supply these needs.

Fuelwood

Many people who live in or near rainforests rely on rainforest wood for fuel, as well as for building. This is the case above all in the developing world. Fuelwood or charcoal are the main sources of energy for heating and cooking for a vast number of people. In fact, experts estimate this to be true for about 40 per cent of the world's population.

In Brazil alone, millions of tonnes of wood are also used each year to produce charcoal. Most of this is then used in the manufacture of steel.

Pulp and Paper Industry

The world uses more than six times as much paper now as it did 60 years ago. Much of the world's supply of pulp and paper comes from large farms with only one crop, or **plantations**, in the Amazon Rainforest of Brazil. The Brazilian pulp and paper industry produces about 8 million tonnes of paper per year. However, it produces even more pulp – about 10 million tonnes per year. To do this, vast areas of natural forest are cleared. Then, plantations are planted. The crop is generally eucalyptus or pine.



This woman has gathered fuelwood from rainforest in Liberia, west Africa.

The damage to the environment does not stop there. Huge networks of roads have to be built. Pulp and paper factories pollute the air and water. Thousands of people are forced to relocate. The pulp is exported to countries all over the world. China is by far the biggest customer. It takes about one-third of Brazil's pulp exports. Constant harvesting of the rainforest is needed to supply this huge demand.

What Can Be Done?

Specific plantations are being created to provide forest resources such as fuelwood and pulpwood. These plantations are made up of a few species of rapidly growing trees. Furthermore, with improved methods of paper recycling, less wood is taken from the rainforest.

Paper-Recycling Programs

China has developed an extensive paper-recycling program. In 2006 alone, this saved 54 million tonnes of wood from being harvested for pulpwood. China is supporting an international market for wastepaper, which it then recycles for pulp. Today, about 60 per cent of the fibre used to make paper and paperboard products in China comes from wastepaper.

In addition to this, several international organizations have been set up to counteract illegal logging activities. In 1993, the Forest Stewardship Council introduced a certification scheme to track wood and pulp products. This helps ensure that only wood from legal and sustainable logging operations comes onto the market.



This man is delivering paper to a collection centre in Beijing, China, for recycling.