



RAINFORESTS



WHERE ARE THEY FOUND?

Found on every continent except Antarctica, rainforests are ecosystems filled with mostly evergreen trees that typically receive high amounts of rainfall. There are two types of rainforest: tropical rainforests are found near the equator, with high average temperatures and humidity, while temperate rainforests lie mostly in coastal, mountainous areas within the mid-latitudes.

A RAINFOREST IS TYPICALLY MADE UP OF FOUR KEY LAYERS:



- **emergent**
- **upper canopy**
- **understory**
- **forest floor**

In the **top emergent layer**, trees as tall as 200 feet (60 meters) grow far apart and tall, their branches reaching above the canopy.

The **upper canopy**, a deep layer of vegetation roughly 20 feet (6 meters) thick, houses most of the rainforest's animal species and forms a roof that blocks most light from reaching below.

Below the canopy, **the understory** is a low-light layer dominated by shorter plants with broad leaves, such as palms and philodendrons.

On the dark **forest floor**, few plants are able to grow and decaying matter from the upper layers is prevalent, feeding the roots of the trees.

WHY "RAIN" FORESTS?

Rainforests are often partly self-watering. Plants release water into the atmosphere through a process called **transpiration**. The moisture helps create the thick cloud cover that hangs over most rainforests. Even when it's not raining, these clouds keep the rainforest climate (weather conditions over a long period of time) humid and warm.

RAINFOREST LOSS



About 40% of the South American continent is covered in rainforest, but **deforestation** is endangering these rainforests worldwide, driven by logging, mining, agriculture, and ranching. About 17 percent of the world's biggest tropical rainforest, The Amazon Rainforest, has been destroyed over the past 50 years, and losses recently have been on the rise. Tropical rainforest now covers about six percent of Earth's land surface.



Two countries accounted for 46 percent of the primary (meaning old-growth, undisturbed) tropical rainforest loss in 2018: **Brazil**, which is home to more than half the Amazon, and **Indonesia**, where forests are cut down to make way for producing palm oil, which can be found in everything from shampoo to saltines.

RAINFOREST BENEFITS

When we lose rainforests, we lose an important natural resource. Tropical rainforests are centers of biodiversity, holding an estimated half of the world's **plants and animals**, many of which have yet to be catalogued (some scientists estimate that it's two-thirds of the world's plants). Rainforests **produce, store, and filter water**, protecting against soil erosion, floods, and drought.

Many of the plants found in rainforests are being used to make **medicine**, including anti-cancer drugs, along with beauty products and foods. Rainforests are also home to **endangered or protected animals** such as the Sumatran rhino, orangutans, and jaguars.

Forest trees also absorb **carbon**, an important function needed to combat climate change.

FIND OUT MORE

<https://video.nationalgeographic.com/video/environment/101-videos/00000169-a75c-dfeb-abe9-ff5d62f80000>

EXAMPLE QUESTIONS

Which regions are hot and humid?

What is the largest tropical rainforest?

How much of the Earth's surface area is covered in rainforest?

How many acres of rainforest are burnt every year?

Name the layers of the rainforest from top to bottom