

# Forests and Deforestation

by Sophia



## WHAT'S COVERED

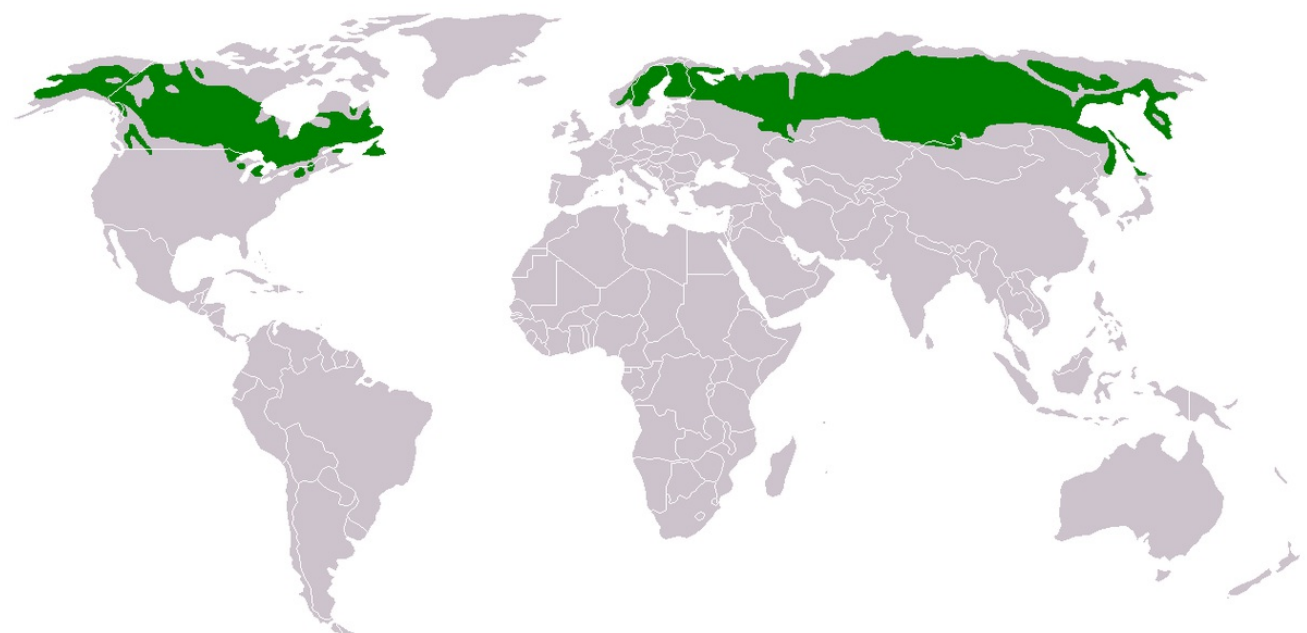
In this lesson, we will cover the topic of forests and deforestation. We will discuss three forest types: taiga, temperate forests, and tropical rainforests. We will discuss causes of deforestation and its impacts. Lastly, we will explore efforts to sustain forests and protect them from deforestation. Specifically, this lesson will cover the following:

## 1. Forest Types

We are going to discuss three types of forests. They differ from each other largely in the amounts of rainfall and sunlight they receive, their soil nutrients, their biodiversity, and their ability to withstand disturbances.

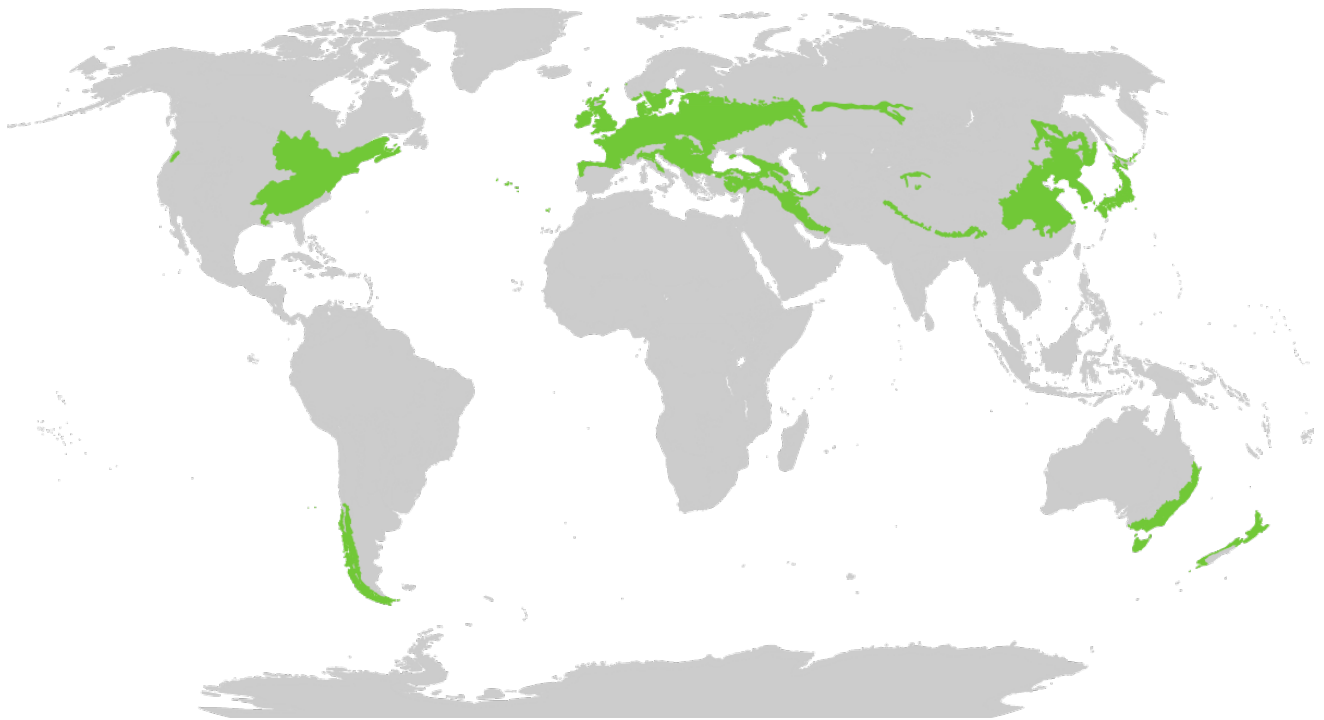
### 1a. Taiga Forests

The first type, taiga, are forests located in colder areas, and they are usually in higher latitudes, as shown in the map below. For about half of the year, taiga forests get very little rainfall and sunlight. They have low biodiversity and are mainly comprised of conifers. As a result of such factors, taiga forests have soil that is poor in nutrients, grow slowly, and produce a low yield of biomass. In addition, if a taiga forest is cleared, it will recover very slowly, and the soil might even blow away.



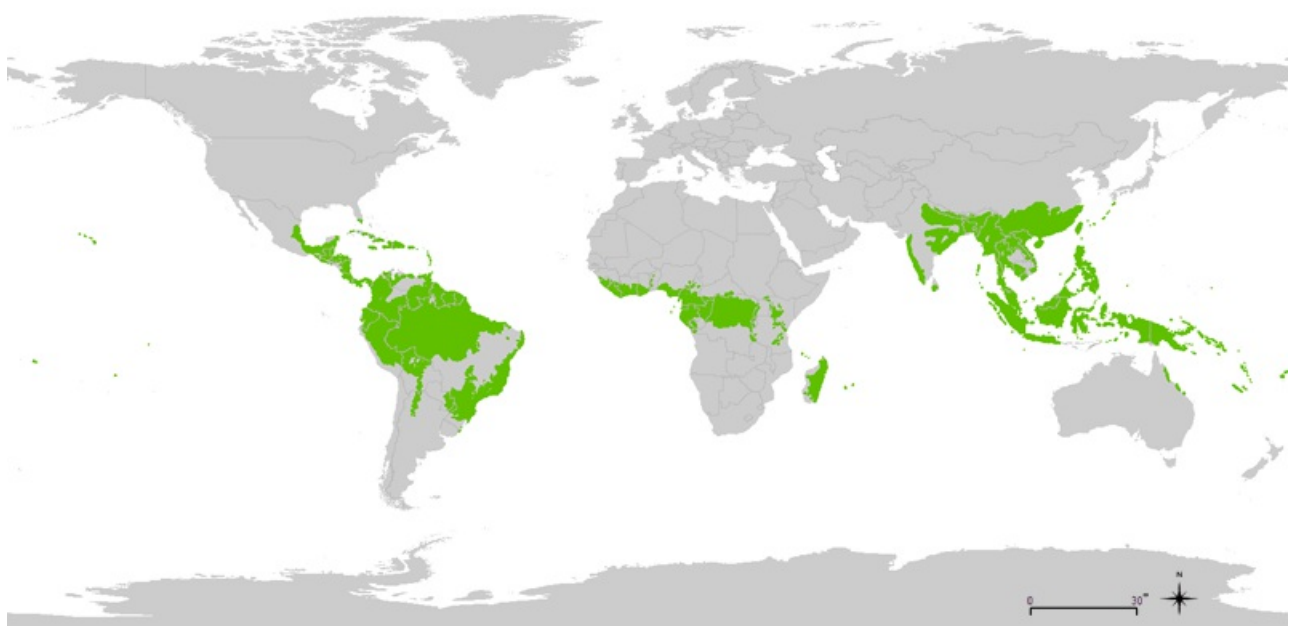
## 1b. Temperate Forests

Temperate forests are those in mid-range latitudes and are located in regions with moderate sunlight, rainfall, and temperature ranges. They tend to have a moderate amount of biodiversity and consist of a mixture of deciduous hardwoods and evergreen trees. Temperate forests usually have deep, fertile soils, are relatively resistant to disturbances, and if cleared, they will often grow again.



## 1c. Tropical Rainforests

Lastly, in lower latitudes, there are tropical rainforests. They are generally highly biodiverse and are a mixture of deciduous hardwoods and evergreens. Tropical rainforests occur in locations with high levels of rainfall, temperature, and sunlight. Rainforests tend to have shallow soils with little mineral content. If cleared, they rarely grow back.



## 2. Deforestation and its Causes

**Deforestation**, today's key term, is the conversion of forested areas to unforested land for human use of the land or resources from the land.



The following are some causes of deforestation:

- Human population growth
- Climate change
- Increased need for agricultural land
- General logging
- Harvesting for fuel
- Burning
- Grazing



### TERM TO KNOW

#### **Deforestation**

The conversion of forested areas to unforested land for human use of the land or resources from the land.

### 3. Impacts of Deforestation

Deforestation does not just affect the local ecosystem and economy. It can also have impacts at the regional and global level.

Impacts of Deforestation	Explanation
Carbon storage	Forests and trees can store large quantities of the atmospheric greenhouse gas carbon dioxide, preventing it from contributing to global warming. As forests disappear or are burned, this capability is lost and global climate change is accelerated, as the carbon dioxide from that biomass reenters the atmosphere all at once.
Water cycle	Trees are important in maintaining homeostasis of the water cycle, and forests affect regional climate. Without them, the cycle could be thrown out of balance. Rainforests depend on heavy rainfall, yet heavy rainfall weather patterns also depend on the existence of rainforests. In addition, the destruction of forests has led to local and regional croplands being abandoned, because lower rainfall means less humidity and more extreme summer temperatures.
Soil erosion	Deforestation increases soil erosion and exposure to direct sunlight. As a result, deforested areas are unable to sustain much life at all.
Loss of biodiversity	A large portion of the world's biodiversity lives in tropical rainforests. As they are deforested, massive amounts of species are going extinct from habitat loss, resulting in a significant decline in global biodiversity.

### 4. Sustaining Forests

The following have been some of the efforts undertaken to sustain forests and protect them from deforestation:

- Planting trees to start new forests
- Establishing nature preserves and green zones that cannot be affected by human development
- Regulating logging practices to prevent unsustainable use
- Educational programs focused on forestry management



#### SUMMARY

In this lesson, we learned about three **types of forests**: **taiga forests**, **temperate forests**, and **tropical rainforests**. We learned about some of the **causes of deforestation** and its **impacts**, as well as efforts toward **sustaining forests**. Don't forget the key term, deforestation, which is the conversion of forested areas to unforested land for human use of the land or resources from that land.

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## ATTRIBUTIONS

- [Taiga forest map](#) | **Author:** Unknown | **License:** Creative Commons Attribution-Share Alike 3.0 Unported
- [Temperate forests map](#) | **Author:** Terpsichores | **License:** Creative Commons Attribution-Share Alike 3.0 Unported
- [Tropical rainforest map](#) | **Author:** Unknown | **License:** Public Domain
- [Jungle burned for agriculture](#) | **Author:** Jami Dwyer | **License:** Public Domain



## TERMS TO KNOW

### Deforestation

The conversion of forested areas to unforested land for human use of the land or resources from the land.