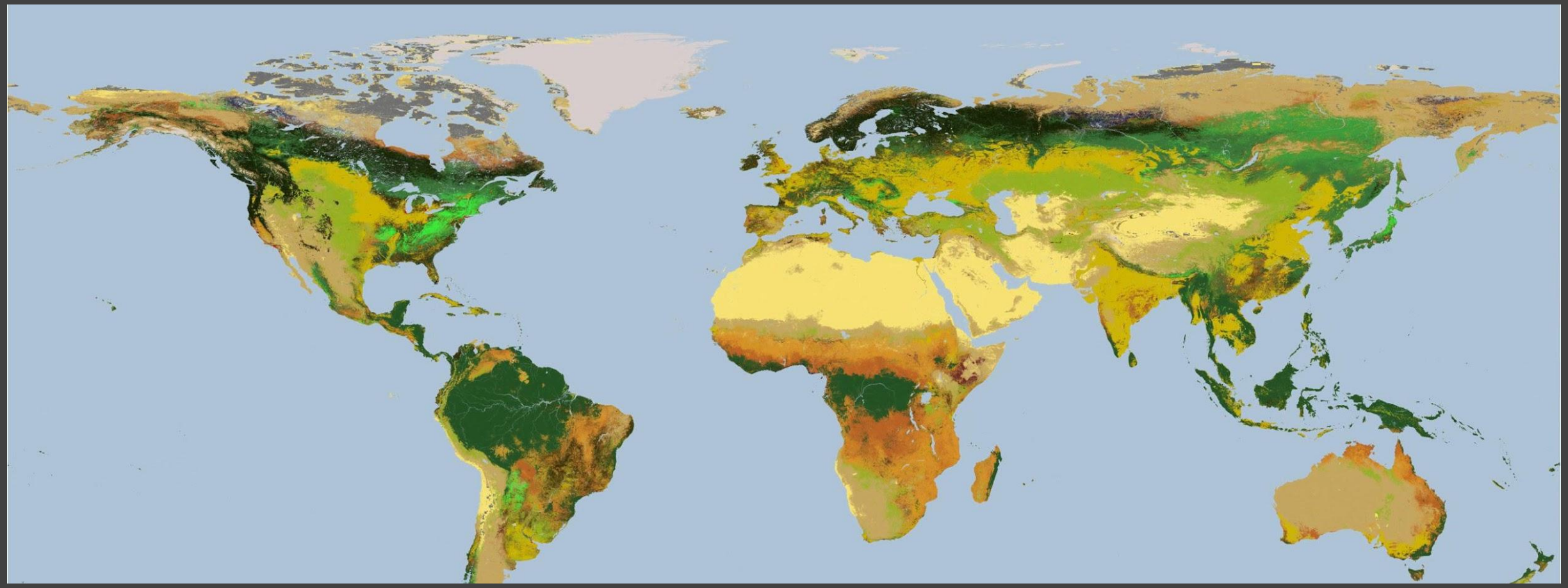
Deforestation – Some info!

- 31% of our planet is covered with forests.
- There are 2 regions in particular where forests are common:

A) A large area of forests is found across **northern North America, Europe, and Asia.**

B) Stretching **out from the equator on all earth's land surfaces is another wide belt of forests** of amazing diversity and productivity.

These tropical forests include dense **rainforests**, where rainfall is abundant year-round. They also include **seasonally moist forests**, where rainfall is abundant but seasonal, and **drier, more open woodlands.**



Where are the World's Forests Located?

- **Tropical forests** span both sides of the Equator, thriving in the warm, usually wet, climate, under the sun's most direct rays.
- **Boreal forests** are found across the high latitudes of all land areas in the Northern Hemisphere.

(Take a look at the different green parts of the map)

Deforestation – Some more info!

- **Human activity** and other factors result in deforestation.
  For example: to make room for **farms and pastures**, to **harvest timber**, and **to build roads and houses**. **Tropical forests of all varieties, in particular, are disappearing** rapidly by human activity.
- Other causes of deforestation: **drought**, **forest fires**, **and climate change**.
- Deforestation meets some human needs, it also causes major **problems**, including extinction of plants and animals, and climate change, and even social conflict.
- The **impact** is not just local, but also has global impact.

How Do Deforestation Events Occur?

Intentional Deforestation of Tropical Forests

Turning land to cropland and pasture. Countries build roads to improve the transportation of goods. The road development itself causes some deforestation. The new roads also provide entry to land that could not be accessed before. After loggers have harvested all the wood in the area, they move on. The roads and the logged areas attract settlers. The settlers destroy the remaining forest for cropland or cattle pasture.

Droughts

Rise in global temperatures, droughts are expected to become more frequent and severe.

Forest Fires

There are some intentional fires that get out of control and burn through the understory of nearby forests. In the past, thousands of intentional fires have raged out of control in many countries, burning millions of hectares of rainforest.

Climate Change

Many trees are suffering from climate change. For example, pine trees are more likely to become infected with insects due to warmer, drier conditions. These bugs lay their eggs in the trees and eventually kill the tree. When these kinds of forests are gone, birds and small mammals that lived there have to find new homes – if they can.

Impacts of Deforestation

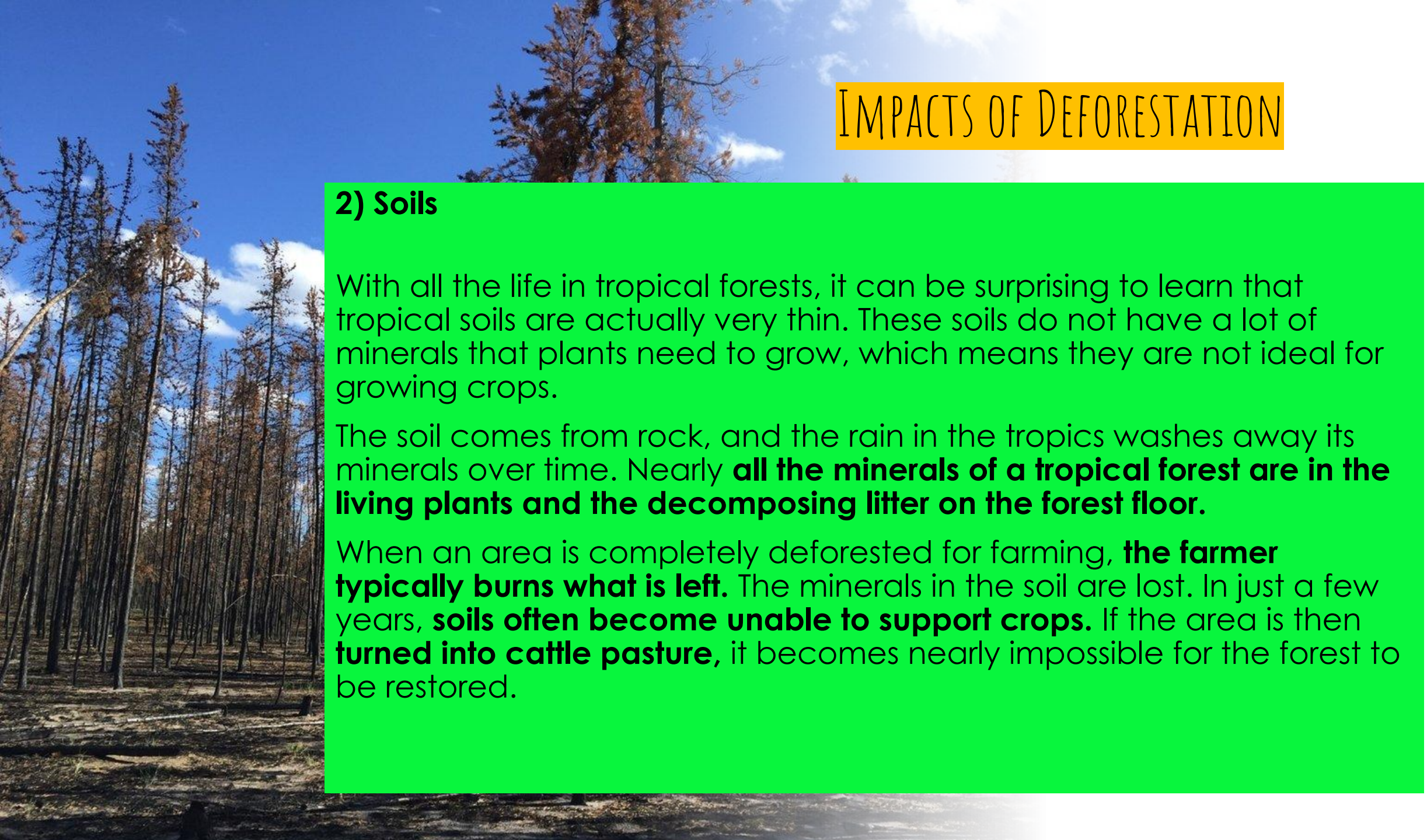
1) Biodiversity

Biodiversity matters for many reasons. Here are the most important ones:

Tropical forests cover only 7% of earth's dry land. Still, they hold about **half of all species** on earth! Many species can only be found in small areas. This makes them more likely to die out.

Rainforest products are popular around the world. **Fruits, nuts, natural oils, medicines**, etc. Some of these products can be taken out of the forests in ways that do not cause harm to the environment. If the forests are destroyed, people will no longer be able to get those products.

Plants and animals in the rainforest may hold the cures for diseases and ways to improve the food we produce. Many of these plants and animals may not have even been discovered yet!



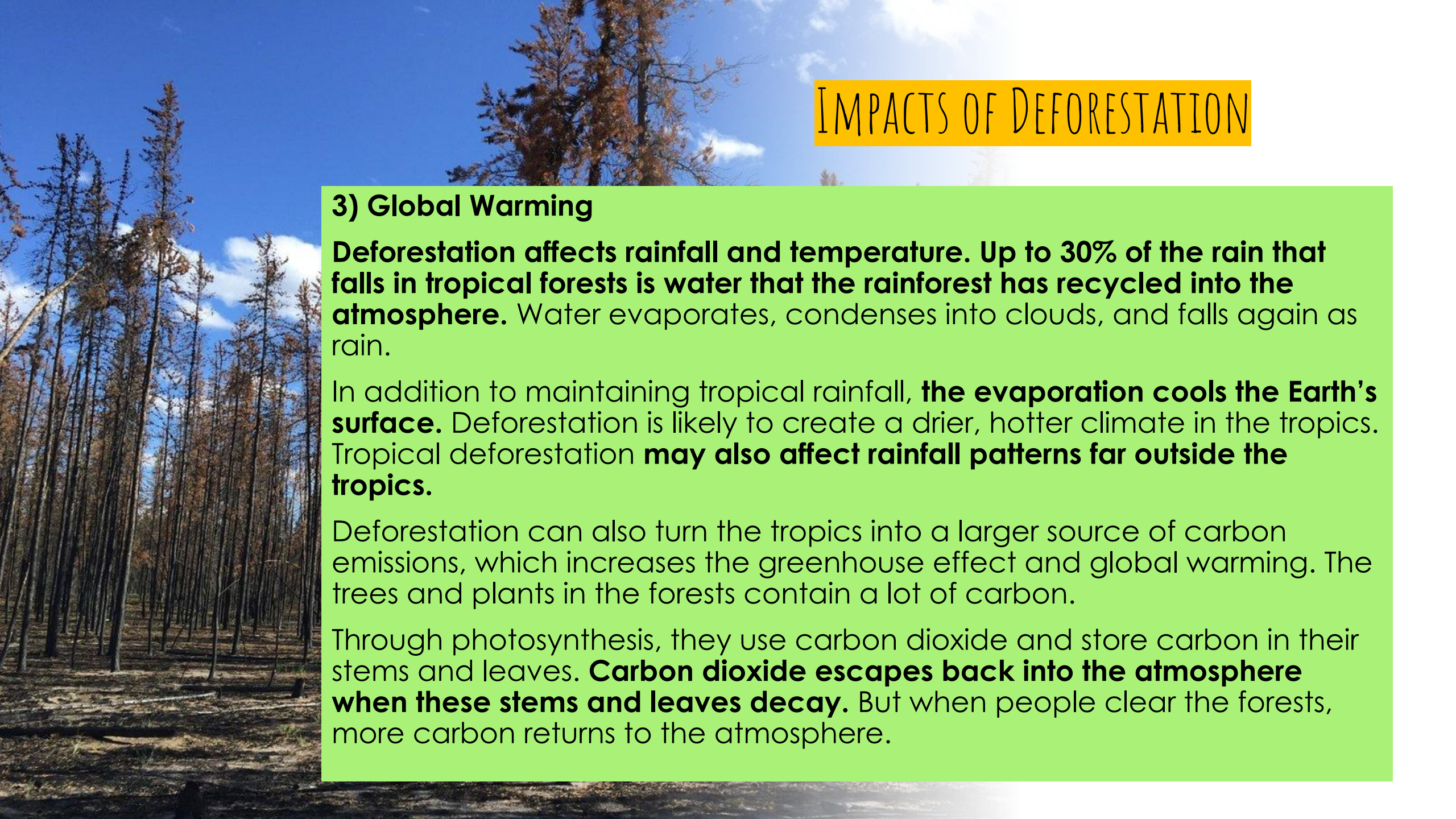
Impacts of Deforestation

2) Soils

With all the life in tropical forests, it can be surprising to learn that tropical soils are actually very thin. These soils do not have a lot of minerals that plants need to grow, which means they are not ideal for growing crops.

The soil comes from rock, and the rain in the tropics washes away its minerals over time. Nearly **all the minerals of a tropical forest are in the living plants and the decomposing litter on the forest floor.**

When an area is completely deforested for farming, **the farmer typically burns what is left.** The minerals in the soil are lost. In just a few years, **soils often become unable to support crops.** If the area is then **turned into cattle pasture,** it becomes nearly impossible for the forest to be restored.



Impacts of Deforestation

3) Global Warming

Deforestation affects rainfall and temperature. Up to 30% of the rain that falls in tropical forests is water that the rainforest has recycled into the atmosphere. Water evaporates, condenses into clouds, and falls again as rain.

In addition to maintaining tropical rainfall, **the evaporation cools the Earth's surface.** Deforestation is likely to create a drier, hotter climate in the tropics. Tropical deforestation **may also affect rainfall patterns far outside the tropics.**

Deforestation can also turn the tropics into a larger source of carbon emissions, which increases the greenhouse effect and global warming. The trees and plants in the forests contain a lot of carbon.

Through photosynthesis, they use carbon dioxide and store carbon in their stems and leaves. **Carbon dioxide escapes back into the atmosphere when these stems and leaves decay.** But when people clear the forests, more carbon returns to the atmosphere.