

(1) Keywords

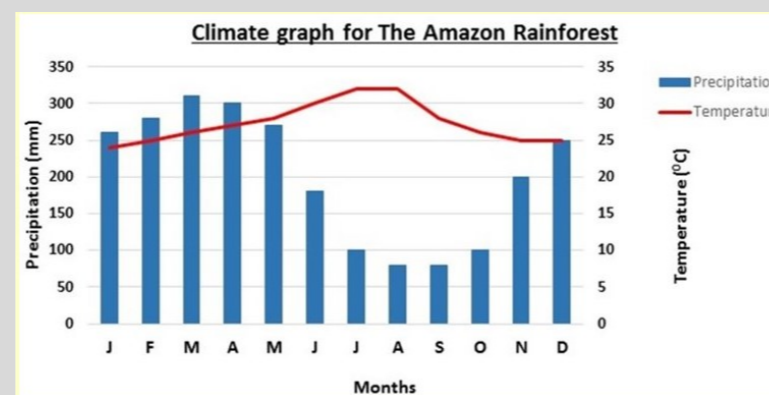
Tropical rainforest	An biome found between the latitudes of 23.5°N and 23.5°S (the Tropics).
Soil erosion	This is when the soil degrades in quality and is wearing away. This causes soil to become less fertile.
Adaptation	The process where a plant or animal becomes better suited to its environment so it can survive.
Biodiversity	The variety of organisms found in an ecosystem.
Deforestation	The removal of trees to clear the land for a purpose.
Selective logging	The removal of selected trees within a forest based on criteria such as age, height, or species.
Ecotourism	A type of tourism that involves destinations where plants, animals are the attraction and environmental damage is minimal.

(2) Tropical rainforest climate

Tropical rainforests do not experience seasons like we do in the UK. Instead they have wet and dry seasons which are months each.

Tropical rainforests have a humid climate:

- They have high precipitation levels all year round
- They have high temperatures all year round



(3) Plant and animal adaptations

Sloth	They are slow moving to conserve energy. They are also camouflaged to prevent predators from seeing them in the trees. They are nocturnal to avoid predators.
Toucan	Their large bill also helps them keep cool in the hot environment in which they live. They also have two toes facing forward and two facing backwards to cling to the tree where they live.
Drip tip leaves	These leaves channel the water so it runs off the leaf. This means that the weight of the water does not damage the leaf. It also prevents bacteria from growing in the standing water.
Large buttress roots	These roots anchor the trees into the soil, to prevent them from falling over as they grow extremely tall. These roots are shallow and spread widely.

(4) Causes and impacts of deforestation

Causes of deforestation include:

- **Logging:** the removal of trees to make wooden products
- **Mineral extraction:** mining and drilling for resources
- **Population growth:** building roads and housing for people
- **Energy development** through hydro-electric power
- **Subsistence and commercial farming**

Impacts of deforestation include:

- **Soil erosion:** degradation (worsening) of soil quality
- **Contribution to climate change:** trees absorb carbon dioxide
- **Loss of biodiversity:** threats to species
- **Economic development:** increased profits

(5) Strategies to sustainably protect the rainforest

There are several strategies that can help to manage the rainforest sustainably, these include:

Strategies to improve the sustainability of deforestation:

- **Selective logging:** The removal of selected trees within a forest based on criteria such as age, height, or species.
- **International hardwood agreements:** agreements to sustainably source wood for products such as furniture.

Strategies to sustainably protect the tropical rainforest:

- **Ecotourism:** tourism that involves minimal harm to the environment.
- **Conservation and education:** ensuring local people know how to care for their environment and its value.
- **Debt reduction:** removing some or all of a country's debt if they pledge to protect their rainforest.

(6) Tropical Rainforests value and protection

The tropical rainforest is a very valuable **biome**.

It also contains valuable materials and ingredients for:

- **Food:** bananas, vanilla, sugar, cocoa and more come from the rainforest.
- **Medicine:** 25% of western medicines contain ingredients from plants in the tropical rainforest.
- **Shelter:** they provide furniture products for many homes.
- **People:** indigenous tribes make use of the natural resource and live in harmony with the rainforest.
- **Biodiversity:** It is home to around 50% of the world's plants and animal species.
- **Climate control:** The rainforest produces 28% of the world's oxygen, and also absorbs significant amounts of carbon dioxide to limit climate change.



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