

Rattled Rainforests



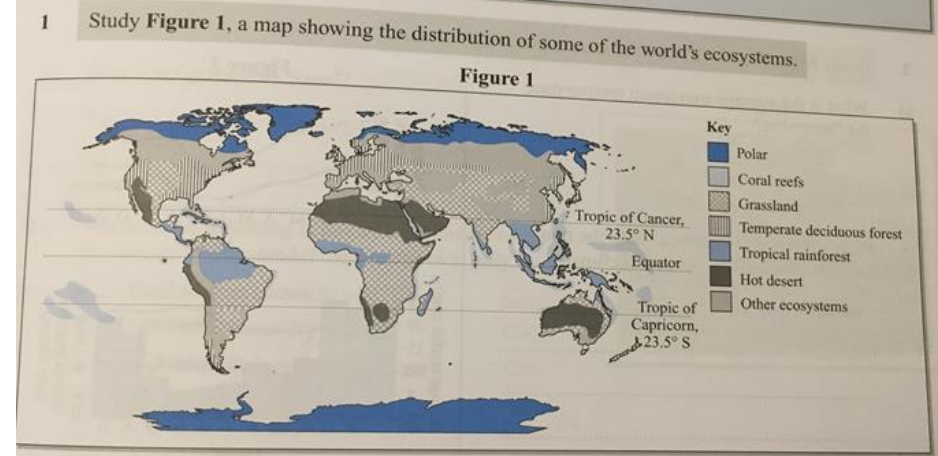
6 Global Ecosystems:

1. Coral Reefs
2. Grassland
3. Tropical Rainforest
4. Temperate Rainforest
5. Hot Desert
6. Polar

An **ecosystem** is a community of plants and animals and the environment in which they live. Ecosystems contain both living (biotic) and non-living (abiotic) elements.

Biotic elements are plants, animals, insects and birds which depend on each other for food.

Abiotic elements include the climate, soils and rocks. This non-living environment provides nutrients, warmth, water and shelter for the living parts of the ecosystem.



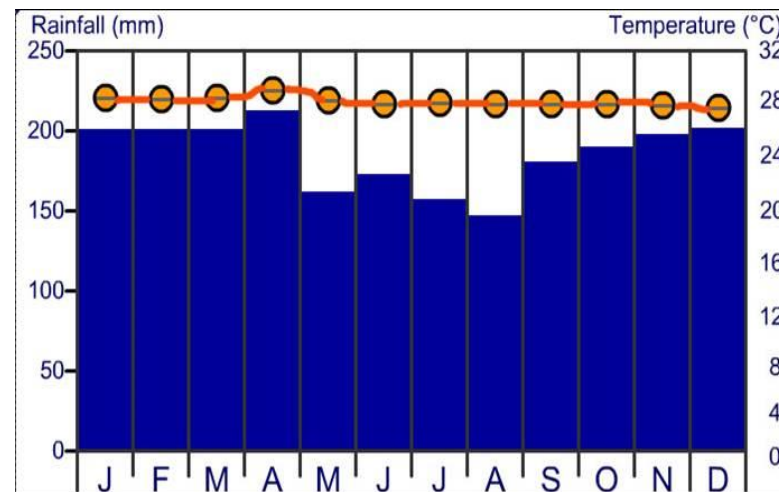
A **'good'** is a product which can be bought and sold. It has a weight and a price. Usually, goods are traded between countries.

A **'service'** is the role something plays. It usually affects people, money or the environment.

| Goods | Services |
|----------|---------------------------|
| Nuts | Reducing flood risk |
| Medicine | Protects soils |
| Oils | Agriculture |
| Wood | Carbon sink |
| Vanilla | Tourism |
| Coconuts | Habitats |
| Cocoa | Maintains the water cycle |
| Fruits | |

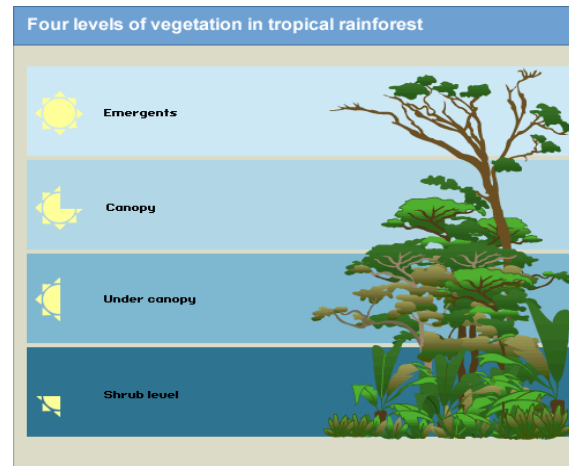
Tropical Rainforests: Climate

- High annual temperatures (26-28 °C)
- 2°C temperature range
- Fluctuating but high rainfall
- Over 2000mm annual rainfall



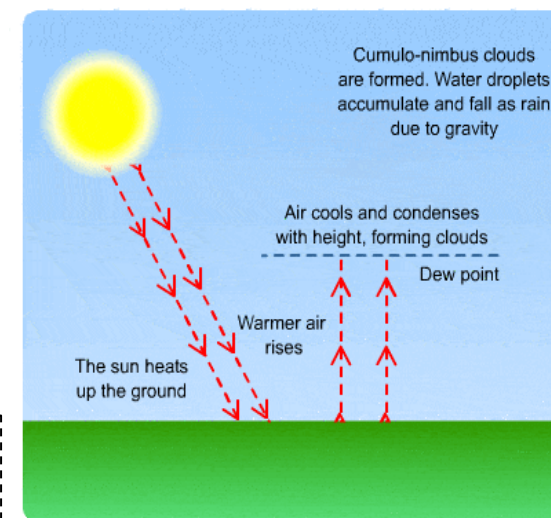
Describing graphs

TEA = **T**rend, **E**xample, **A**nomaly



4 key layers

1. Emergent
2. Canopy
3. Undercanopy/understory
4. Forest floor/ shrub layer



Convectional Rainfall

- When the land warms up, it heats the air above it.
- This causes the air to expand and **rise**.
- **Transpiration** occurs from plants (this is when trees sweat) which also causes air to rise.
- As the air rises it **cools** and **condenses** forming rainfall.

This type of rainfall is very common in tropical areas in the **afternoon** around 3pm.

Flora = plants/vegetation
Fauna = animals

Adaption = A change to suit the conditions in which they live.

Importance of Tropical Rainforests

- Timber- lucrative resource on the international market
- Periwinkle- medical plant to reduce Leukaemia deaths
- Carbon sink- trees take in carbon dioxide, reducing climate change/global warming
- Habitats for a variety of species of flora/fauna
- Home to indigenous people
- 3000 fruits
- Palm oil- found in many everyday products

Exploitation of Tropical Rainforests

The act of using resources in a way which threatens people, the economy or the environment.



Sloth



Jaguar



Toucan



Poison Dart Frog



Fan Palm



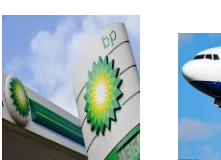
Buttress Roots



Lianas



Strangler Fig



GOLDSMITHS
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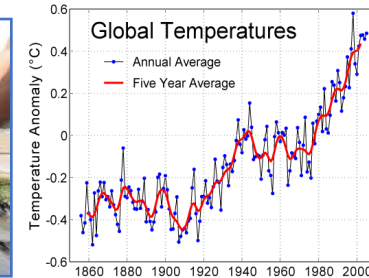
Amazon



Amazoff

Impacts of Deforestation

1. Increase CO₂ in atmosphere leading to increased global warming
2. Animals habitats lost
3. Endangered species become extinct
4. Tribes lose their homes and way of life
5. Less chance of finding cures to diseases such as cancer
6. Increased flooding as there are less trees to intercept water
7. Change in traditional way of life as tourists move into the area
8. Infertile land as soil is over used and loses all of its nutrients
9. Brazil can improve its economy
10. Polluted river due to oil extraction
11. People of Brazil may have higher standards of living as the government can use the money they make from the rainforest to improve services
12. Local people rarely benefit from economic activity-most profits go to large multi-national companies



Sustainable management = meeting today's needs whilst protecting the environment and resources for the future.

National Parks

These areas are protected, with no development or change of land use allowed. This helps to stop destruction of the rainforest.

Eco Tourism

In recent years, rainforests have been advertised as destinations for ecotourism. This aims to introduce people to the natural world without causing any environmental damage.

Afforestation

Afforestation is the opposite of deforestation and is where the trees which have been cut down are replaced by other trees. The replacement trees can take a long time to grow and build up the canopy and so in the meantime, the soil can still suffer from erosion.

Education

By educating those involved in the destruction of the rainforest about the consequences/impact of their actions, it may reduce their involvement. If you educate people on how to manage the rainforest, this may also help.

Monitoring

Use of satellite technology and photography to check that any activities taking place are legal and follow guidelines for sustainability. This can reduce unnecessary destruction of the rainforest.

Forest Reserves

These are areas of tropical rainforests which are protected from exploitation. There are rules and restrictions about which areas of land can be used for farming, logging, mining and building roads.

How Tribes Use the Rainforest to Survive

- Homes built on stilts to avoid flooding and to circulate heat
- Hunting for food with fish being the main source of protein
- Subsistence farming, cattle ranching and nomadic farming are common
- Jewellery made from bones and teeth

Tribal Face Painting

Used for many motives such as hunting, religion, culture, emotion, camouflage or to scare away the enemy. Indigenous people of the Amazon have said that "in this power to change ourselves, we demonstrate our humanity and set ourselves apart from the world of the animals".



Case Study

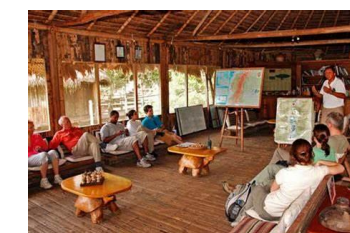
Ecotourism in Ecuador- Yachana Lodge

Advantages:

- Local indigenous people have a more reliable income working in lodges
- Lodges are sustainable as they use solar energy for electricity
- Lodges collect rainwater for toilets and showering
- Tourists are taken on guided tours, sticking to designated paths
- Money from tourism is used to conserve the rainforest and to educate others

Disadvantages:

- Tourists have a high carbon footprint from flying to South America
- Erosion on footpaths causing soil/flora damage
- Introduction of western products to native people (for example, soft drinks, alcohol and cigarettes).
- Litter



Amazon tribe makes first contact with outside world

The Amazon's last lost tribe: Never-before-seen pictures capture the lives of Peruvian nomads who are untouched by civilization

