

Interdependence

- Plants prevent soil erosion as their roots hold the soil together and the dense leaf coverage protects it from heavy rainfall and wind
- Plants rely on bees and butterflies for pollination, the bees and the butterflies need the pollen for food: symbiotic relationship
- Epiphytes grow on other plants to reach the sun but do not have roots so rely on the rainfall for water
- Deforestation reduces CO₂ absorption, which adds to the greenhouse effect and changes the climate

Peruvian Amazon Rainforest

- Covers 60% of Peru
- Average temperature: 28°C
- Annual rainfall: 2600mm



Threats to Biodiversity

- Timber: the value of hardwood has led to extensive logging, of which 95% is unregulated and illegal.
- Carmisea natural gas project could earn Peru billions in exports and save it \$4 billion for its own energy use. However, it is in one of the most bio diverse areas of the rainforest and the home of several tribes. It has already resulted in deforestation, water pollution and landslides.
- Gold mining: deposits in the rivers. Huge machinery is required to extract it. Mercury is also used which is highly toxic and has damaged the water in the area, which poisoned local tribes
- Agriculture: lowland areas are cleared for farming cattle and soybeans. Fires used to clear the rainforest can burn out of control, wiping out large habitats and killing animals
- Highways: building a major road, Trans-oceanic Highway, will cause deforestation for the space required. Fears it will also worsen illegal logging near the road

Value to Humans

- Timber: many valuable hardwood trees e.g. Mahogany for furniture
- Minerals: oil, natural gas and gold
- Hydro-electricity: plans to construct 15 dams, for local consumption and to sell electricity to Brazil
- Medicinal plants: scientists believe plants can help cure cancer, help digestion and many more undiscovered properties
- Amazonian tribes: live a sustainable life in the jungle

Value to the Planet

- Biodiversity: Peru has nearly 3000 known species of fauna, 16% which are endemic to Peru (only found there)
- Water cycle: rainforests give off water through transpiration, increasing humidity and rainfall. The climate is dryer when rainforests are cut down
- Carbon cycle: rainforests absorb CO₂ when they photosynthesise and store a lot of carbon. If trees are cut down and burnt, the carbon is released into the atmosphere increasing the greenhouse effect

Sustainable Management

- Management plans are required for all logging. However, there is so much illegal logging over a huge area so it is hard to police
- Indigenous community reserves: tribes have ownership over their land and the extraction of materials. They have sustainable management plans of their own.
- Purus-Manu Conservation Corridor: Alto Purus and Manu National Parks, as well as indigenous community's reserves. Supports long-term biodiversity conservation, including river dolphins, howler monkeys and Mahogany trees, and benefiting about 60 local communities. 10 million hectares, representing the largest protected area of the Peruvian Rainforest.