

Current conditions

Most obvious human transformation is cutting of forests

- Key ecological roles: repository for biodiversity
- Affect local and global climate and air quality
- Affect hydrological cycle
- Influence soil quality and formation
- Prevent or slow down erosion

No clear idea of speed of deforestation

- Because there is no record on a global scale of how much woodland there is today, or in the past

Deforestation by pollen analysis

- Started around mesolithic 9,000 yrs BP
- Waves of romans, phoenicians, western and central europe, australia, south africa, and north america in 200 years cleared more than the europeans did in 2000

Mediterranean Old Lands

- For instance visitors regard the landscape of olive trees, vines, low bushes and strong scented herbs as main attraction: it is however the result of massive env. Degradation brought about by artificial systems of irrigation, and long term pressure from settlement and growing population. The natural vegetation of the Mediterranean was mixed evergreen and deciduous forest of oaks, beech, pines, and cedars.

Secondary forest

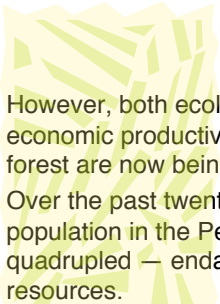
- Clearance, cultivation and subsequent abandonment of forests in the moist tropic has resulted in secondary forest.
- They make up most or all of the remaining forests today.
- The abandoned plots are colonized by herbs, shrubs and a canopy of pioneer trees, that grow rapidly, need a lot of light, and has a low-density of wood. It will take 500 years before this forest will become a primary forest

The Petén'

- The Maya Biosphere Reserve (15,000-16,000 km²) occupies the northern 40% of the Petén, encompassing nearly 10% of Guatemala's land area

About 85% of the Petén was covered with (seasonal) subtropical moist forest – the majority of the closed tropical broadleaf forest in Guatemala

- less than 50% remains.
- The northern Petén's vegetation (including the Biological Field Station) has much of the same flora as in the Yucatán Peninsula of Mexico and northern Belize. The Maya BR with the contiguous forests of Mexico and Belize is now Mesoamerica's last large lowland forest,

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- However, both ecological integrity and economic productivity of the Petén's forest are now being threatened.
 - Over the past twenty years, the population in the Petén has nearly quadrupled – endangering the forest's resources.

As the population rises, sections of the forest are burned for agricultural and cattle-grazing purposes.

- Overharvesting and poaching of forest products for overseas markets compound this problem.
- Scarlet macaw chicks are smuggled out under the floorboards of vehicles, duct-taped to keep silent. Although most die during transit, the price is high for a macaw chick, making the temptation for much needed profit too great to discontinue such practices.

A Solution



- Ecotourism

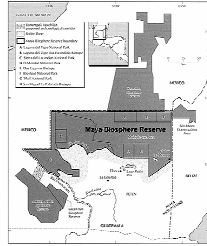
Shift in focus

- One solution is to promote low-impact tourism as an alternative income to slash-and-burn agriculture and destruction of the jungle.

chicle

- each of the trails offers a different, unique focus such as spotting nesting scarlet macaws, viewing millions of fruit bats as they emerge from their "bat cave,"
- participation in the sustainable harvest of "chicle" from the forest, and a trek to unexcavated Mayan ruins. Some of the Mayan Trails culminate in a visit to the famous Tikal ruins.

The Maya Biosphere Reserve, includes five national parks.....



three biotopes and a multiple-use area – Laguna del Tigre and Tikal NP is a World Heritage site.

over 3000 plant species in Maya Biosphere Reserve

- important for extraction of non-timber forest products: e.g. xate palm leaves, chicle, allspice.
- contains more than 300 species of useful trees
- some seeds were an important food source in pre-Columbian times

1453 vertebrate species and at least 333 bird species

- The Petén is an important refuge for many species, such as howler monkey, ocelot, margay cat, jaguar, puma, northern tapir, harpy eagle, macaws, Moreletti's and American crocodiles, iguana, beaded lizard and boa constrictor.

- The Maya BR abuts two neighbouring protected areas: in Mexico, Calakmul Biosphere Reserve (8250 km²); in Belize, Río Bravo Conservation Area (610 km²)

Conservation Int'l and ProPetén

- ProPetén works with local communities to conserve biological diversity by increasing environmental awareness and developing economic alternatives for local communities.

The Mayan Trails

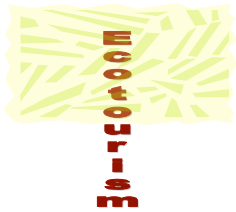
- are a series of community-led and managed trails covering different ecosystems and villages in the Maya Biosphere Reserve.



3 day trek

- ...begins at the small agricultural community of Paso Dos Cavallos, about 70-km northeast of Flores, the Peten's capital.
- This is where Conservation International and the local community, consisting of about 63 families, have joined forces to prepare the village for tourism. A small, rural community such as Paso Dos Cavallos greatly benefits from the revenue brought in by tourists, and in exchange the visitors get a rare opportunity to glimpse into the everyday lives of the people of rural Guatemala.

A Solution



- Ecotourism

A Solution

- ecotourism --" responsible travel to natural areas that conserves the environment and sustains the well-being of local people. "

Ecotourism

- is an increasingly popular form of tourism in which tourists seek out wild and scenic areas....
- such as rainforests or mountains for an active and educational trip.
- The tourists are usually from North America, Europe or Australia/New Zealand; Germany their destination is often in the developing world.

Ecotourism

- Ecotourism has also become popular among people interested in both environmental conservation and sustainable development. It has been called a way to save the rainforest and a "win-win development strategy for undeveloped rural areas."

Ecotourism (the game)

- In many situations, however, ecotourism fails to deliver on its promise.
- Many researchers have studied ecotourism's failures as well as its successes. In this game, you can try your hand at developing an ecotourism project in the Amazon.
- Can you make ecotourism sustainable? Good luck!



Your challenge

<http://eduweb.com/ecotourism/>