Global Conservation Issues

What happens when tropical rainforests are destroyed?

Global warming

Greenhouse gasses: global warming is being caused mainly by the emission of greenhouse gasses from industrial processes – these gasses include carbon dioxide (CO_2), Methane, and Nitrous Oxide. These gasses collect heat and do not leave the atmosphere, thus causing the temperature on the earth's surface to rise.

Increased temperature: The earth's surface temperature has increased by 1° F in the last 100 years. This does not seem like much, but even a small increase in global temperature can have drastic results. For example, the polar ice caps are already beginning to melt, and if this continues the following could happen:

Coastal inundation. Some evidence indicates that the sea level is already rising due to melting of glaciers, which means that the coastal regions, like South Florida, could eventually be underwater if the glaciers continue to melt.

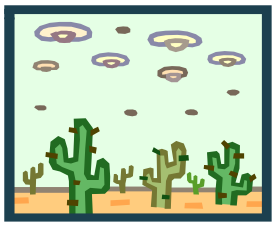
Extinction of animals and plants. Some animals and plants that cannot adjust to climate change may go extinct. For example, some coral are dying, and many believe that it is because of minute changes in temperature which leave the coral more susceptible to disease.

Deforestation: Deforestation contributes to global warming since tropical and temperate forests act as "carbon sinks" and help rid the atmosphere of excess CO_2 due to high rates of photosynthesis. Without our forests, there will be fewer carbons sinks, which means more CO_2 will remain in the atmosphere and contribute to global warming. Also, when rainforest trees are burned they release CO_2 into the atmosphere, which further contributes to global warming.

Annual rainfall decrease

Tropical rainforests: Rainforests are so named for a reason. In South Florida, we often get 1000 – 1500mm a year. Average rainfall in a lowland rainforest is usually greater than 2000mm a year, and can exceed 4000mm a year in the some areas. This large amount of rain is thanks to all the trees, which are transpiring. The trees absorb water like a sponge and release it back into the atmosphere forming rain clouds. As rainforests disappear, the rain is disappearing with them. Droughts are becoming more common in some places, which can affect crops and food supply.

Desertification: In extreme cases when areas of tropical forests are cleared, the land may turn into desert. This is due to the fact that tropical soils are nutrient poor and often there are not sufficient enough nutrients for trees to grow back, coupled with the fact that without the trees, rainfall becomes scarce. Desertification has already happened in large areas in the northeastern part of Brazil. Here, where there used to be lush green forest there is now barren, infertile desert.



Soil Stability

Landslides: Trees function to hold soil in place, especially on slopes and in hilly areas. When slopes are deforested, there are no longer any trees roots to hold the soil in its place, and likewise there are no trees to pump the water from the soil when it rains. The result is that soil in these areas will often erode, causing massive landslides during the rainy season. Often people get caught in these landslide and homes are destroyed.

Sediment: When soil erosion occurs as a result of deforestation, rivers and other bodies of water can become clogged with sediment. This results in the death of aquatic organisms that depend on clean water and cannot survive in muddy sediment.

Area of tropical forest that has been burned

III. What can you do?

- Reduce consumption and reuse and recycle everything you can (paper, plastic, cans, bottles etc.). This saves the industrial energy required to manufacture new products.

- Your car produces CO_2 emissions. Ride your bike, take a bus or walk whenever possible. Also consider buying a gasoline-electric hybrid car, if at all possible, when you are ready to make a car purchase in the future. You can get 20 to 30 more miles per gallon with a hybrid than with a normal car, which saves gas and dramatically lowers CO_2 emissions.

- Plant trees and support organizations that work to preserve forests (Rainforest Alliance, The Nature Conservancy, etc).

- Encourage your politicians to support policies that encourage industry to reduce greenhouse gas emissions.

- Electricity produces greenhouse gasses - save electricity.

- Go solar – using a solar water heater can reduce your family's CO_2 emissions by up to 720 pounds a year!

- Look for appliances, lighting fixtures and windows that have the ENERGY STAR label. This label indicates that the products are energy efficient and are less harmful to the environment. In addition, these appliances will save energy and reduce utility bills. For example, you can reduce your home's heating and cooling costs up to 15 percent with ENERGY STAR windows.