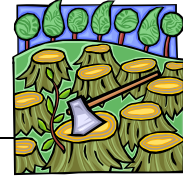


# Deforestation Impacts on Watersheds

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We are all familiar with deforestation. It is nearly impossible not to see it. Deforestation affects people and the environment in many ways, some obvious and some not so obvious. One such effect is watershed degradation.

What is watershed degradation? A watershed is the area over which rain falls and is channeled down to a particular place. The watershed of Lake Yojoa, for example, is all of the land which surrounds the lake and upon which rain falls. The watershed of a community is all the land over which rain falls and fog condenses and then drains into a collecting basin; pipes carry water from this basin or reservoir into the city or town. Watersheds vary in size from a small area above a spring, to a river valley, to an entire mountain range as in the case of Tegucigalpa (Tay-goo-see-GAL-pah). In Honduras, a healthy watershed would be covered with trees and vegetation and contain only controlled populations of people or livestock.

A forested watershed works very much like a good filter: rainfall first strikes high up in the canopy of the trees. The raindrops bounce from leaf to leaf, their power to erode diminishing with each bounce. They then fall softly onto the forest floor which is covered with dead leaves that also absorb their force. The forest shades the soil, so that the sun does not dry it out. The rainwater then seeps into the soil which has become porous due to the action of decomposing insects and the root network of plants. Water filters slowly through the soil until it eventually reaches surface waterways, such as streams or lakes. Water naturally moves slowly through this system, continuously replenishing streams and preventing extreme cycles of flood and drought. The forest cover protects the soil from erosion, so the water that flows is clean.

If the watershed has been deforested, there is less vegetation to shade the soil and to reduce the erosive force of the rain. Water runs swiftly off the mountains taking precious topsoil with it. The water supply dries up in summer because there is no longer the natural mechanism of storage and slow release. Drinking water is clouded with silt, and contaminated with parasites from the waste of humans and livestock that live or work in the watershed. Runoff is immediate because the watershed has lost the ability to store water. Rivers are thick with mud, and flooding occurs frequently and fiercely.

In the Bay Islands off the Caribbean coast, soil from deforested hillsides is washed into the sea where it slowly chokes the beautiful coral reefs that bring the country international acclaim. Siltation poses a similar problem for the hydroelectric power industry, which provides electricity to nearly all of Honduras as well as to many other Central American countries. (Erosion has silted the country's reservoirs to such an extent that their water-holding capacity has been reduced. Sediment can also damage turbine blades and other equipment.) Extensive deforestation has also had an effect on the country's climate. Lack of shade causes temperatures to rise and the dry season to become longer. The Choluteca and Valle regions on the south coast, for example, have become hotter, drier, and less productive as a result of deforestation. A side effect of this is that the campesinos, who are now unable to live off the land, are fleeing the south. "Ecological refugees," they are moving into other areas -- and increasing pressure on Honduras's remaining natural resources.