

Chapter 6**SCIENCE & SOCIETY****• Weathering and Soil****The Destruction of the Tropical Rain Forests**

Tropical rain forests are one of the six kinds of forests that grow on Earth. There are no tropical rain forests in the continental United States. Generally, rain forests grow near the equator in areas where the climate is very wet and warm throughout the year. The trees in the tropical rain forests grow 25 to 50 meters tall. They form a dense green canopy that blocks out sunlight and restricts the vegetation that can grow beneath the trees. Under the canopy, the temperature and humidity remain at constant levels.

Tropical rain forests are home to an incredible number of living things, estimated at several million, many of which have not even been classified yet. More than 100 species of trees may grow within 3 square kilometers. About one half of the world's species of plants and animals live in tropical rain forests. They are all part of a complex ecosystem. An ecosystem is a highly interrelated organization in which all living things both contribute to and take from the available resources.

More than one half of the world's tropical rain forests are in Central America and South America, especially in the Amazon River basin; one fourth are in Southeast Asia and Australia; about one fifth are in Africa. In recent decades, particularly in the last ten years, tropical rain forests have been disappearing at the rate of 160 000 to 200 000 square kilometers a year.

Much of the deforestation, or removal of trees and forest growth, is the result of slash-and-

burn agriculture. In slash-and-burn agriculture, the trees are cut down and then burned to clear land for farming and grazing. This practice has become so widespread that many countries could destroy all of their rain forests in a short period of time. Some of this is done by industrial farmers and some by small farmers. Poor farmers in those countries are only trying to improve their lives by acquiring land of their own for farming or raising cattle. Also, many products used all over the world are grown on rain forest land—cattle, bananas, coffee, rubber, sugar, cotton. But slash-and-burn agriculture is a practice with a short-term future. Tropical rain forest land does not contain a lot of nutrients. After a few plantings, the soil will be used up and more forest will have to be cleared for crops.

If the rain forests are destroyed, hundreds of species of plants and animals will disappear forever. The loss of so many species of potential value could deprive us of new foods and medicines. Rain forests help conserve rainwater by preventing runoff. They help renew the atmosphere as they remove carbon dioxide and replace it with oxygen. They add moisture to the air and affect weather patterns around the world. But so much is not known about these forests that it's impossible to know now what we'll lose if they disappear.

You Decide

1. Often it is hard for people who don't live in a country with rain forests to care about the rain forests' destruction. Why do you think this is so?
2. Some people have suggested that tourism should be developed in countries with tropical rain forests. Would this help the situation in those countries? Why or why not?
3. Some Central American countries have set aside tracts of rain forest to be preserved. Do you think this is a good solution to the problem? Can you think of any other measures that could be used to stop the destruction of the tropical rain forests?