Forecast for the Climate

Tropical rainforests help to stabilize the world’s climate by absorbing solar radiation. They literally soak up sunshine. When forests are cleared, the “shininess” of Earth’s land surface increases, radiating more of the sun’s energy back into space. This is known as the albedo effect. An increase in albedo could lead to disruptions of convection patterns, wind currents, and rainfall in lands far beyond the tropics. Read: one’s own backyard.

Although tropical rainforests do not significantly affect Earth’s oxygen balance, their destruction does play an important role in the increase of carbon dioxide. When jungles are cleared, they are typically burned, releasing considerable quantities of carbon into the skies. Carbon dioxide levels in the atmosphere have increased by about 30% from 1850 to 1990—and are projected to leap a further 75% by 2060. The buildup of carbon dioxide in the atmosphere looks as if it is triggering a greenhouse effect that results in drier climates for some, especially Americans.

In the late 1980’s, scientists began to detect an increase in fluorocarbons in direct proportion to the depletion of the ozone layer. Professor Martha Jefferis hypothesized the following formula for determining the effect of fluorocarbons on the ozone layer.