⬅ Return to index

Problems: LOSS OF FORESTS

Deforestation began thousands of years ago for building ships and houses. However, o ver the last 20 years, more than 300 million hectares of tropical forests (an area larger than the size of India) have been cleared for plantations, agriculture, pasture, mining, or urban development. Today forests cover only half of the area they did when agriculture began 11,000 years ago. This earlier loss of 50% of the Earth's forests is sufficient, in itself, to severely disrupt the global carbon cycle.

"God has cared for these trees, saved them from drought, disease, avalanches, and a thousand tempests and floods. But he cannot save them from fools." *John Muir*

Janet Larsen of Worldwatch Institute says that the amount of global forest cover is a key indicator of the health of the planet. "An intact forest cycles nutrients, regulates climate, stabilizes soil, treats waste, provides habitat, and offers opportunities for recreation." Forests also help regulate local and regional rainfall, are sources of food, medicine, clean drinking water and they provide immense recreational, aesthetic, and spiritual benefits.

World Resources Institute estimates that, at current deforestation rates, about 40 percent of today's intact forests will be gone within 10-20 years. The loss of these trees results in fewer trees to absorb carbon dioxide, and the cut trees release the carbon that had been stored in them.

"Rainforests cover 2% of the Earth's surface, or 6% of its land mass, yet they house over half the plant and animal species on Earth. They originally covered at least twice that area." Rainforest Action Network http://www.ran.org/info_center/about_rainforests.html

Consequences of Deforestation

Removing forests (and their natural functions) causes many serious problems. Removing forests (and their natural functions) causes many serious problems.

- *Loss of trees makes global warming worse.* Through photosynthesis, trees remove carbon dioxide from the air, produce oxygen, and store carbon as wood. One ton of carbon in wood or forest biomass represents 3.67 tons of atmospheric carbon dioxide recycled. We are creating warming, not only by putting more CO2 into the air, but also by getting rid of trees that absorb and remove carbon from the air.
- *Impact on Ecosystems.* Forests preserve water, soils, plants and wildlife. Their destruction aggravates droughts, soil erosion, and pollution of watercourses, and causes extensive flooding, and increased pest populations due to the ecological imbalance.
- *Loss of Species.* Tropical forests contain at least half the Earth's species, so their loss causes a dramatic loss of biodiversity. *Clearing and destructive logging of forests is the single greatest cause of species extinction worldwide.*
- *Harm to Water.* Forests are natural dams that catch rainwater in their canopies and in leaves and litter on the forest floor, retaining and purifying rainwater. Forest logging allows rapid run-off and destroys the ability of the soil to absorb water.

"It's one thing not to see the forest for the trees, but then to go on to deny the reality of the forest is a more serious matter." Paul Weiss

Causes and Motives for Deforestation

The World Rainforest Movement says that "Among the direct causes of deforestation, some of the main ones are: the substitution of forests by other activities (agriculture, cattle-raising, tree plantations, shrimp farming, etc.), logging, mining, oil exploitation, and construction of large hydroelectric dams (which result in the flooding of extensive areas of forest)."

Forests are cleared for agriculture. The deforestation rate in Amazon rainforest, the world's largest jungle, jumped 40 percent in the 12 months to the middle of 2002. The Amazon is an area of continuous tropical forest just under half the size of the continental United States, and has been described as the "lungs of the world" because of its vast capacity to produce oxygen. It is also home to up to 30 percent of the planet's animal and plant species.

The primary driving force behind the destruction of the rainforests is livestock grazing. Beef exporting from Brazil has increased more than fivefold in the last six years. *Worldwatch* magazine, in the article, "Eating Beef" says that "From now on, the question of whether we get our protein from animals or plants has direct implications for how much more of the world's remaining forest we have to raze."

Forests are destroyed by inequitable land policies. International finance institutions require countries to increase exports in order to keep up with their loan payments, and clear-cutting the forests for crops is often their only option. The agricultural land of peasants is taken over to increase exports, forcing them to migrate into the forests where they cut and burn the forest in order to survive. In many cases, governments promote migration to expand the agricultural frontier and allow for more farm exports.

Global warming threatens forests worldwide. Deforestation contributes to global warming, but, in turn, global warming will increase the loss of forests. M any of the world's forests are in poor condition, fragmented, and degradated, and so they are less able to adapt or adjust to climate change. As the global climate warms up, patterns of rainfall will change; and 'normal' temperature patterns will be disrupted. The expected rate of global warming and sea-level rise will be too fast to allow most forests to be able to adapt quickly enough to survive.

The organization, American Forests, reports that the U.S. could offset 20 to 40 percent of its carbon dioxide emissions by increasing carbon storage by 300-600 million tons per year. This would require a comprehensive plan to plant trees, improved forest management practices, and alternatives to wood and biomass fuels.

Each year, forest fires, burn between 6 and 14 million hectares of forest. A major cause of the loss and degradation of forested land comes from fire. The area lost to fire is roughly equal to that caused by destructive logging and conversion to agriculture combined. Severe forest fires, such as those in Indonesia in 1997/1998 and in Australia in 2001/2002, bring enormous and in some cases life-threatening levels of pollutants. Governments rarely address the underlying causes of forest fires. Instead of prevention efforts, they just work to put the fires out. Working on prevention will become essential because global warming will increase the number of forest fires.

Forests are harmed by thet rade in illegally extracted timber. Legal supplies of wood fiber fall short of demand by up to 40 million cubic meters per year. Illegal logging fills the gap--accounting for almost 70 percent of wood supply, meaning that illegal logging *exceeds* the volume of legal logging. All told, illegal logging alone has destroyed 10 million hectares of Indonesia's rich forests, an area the size of Virginia.

It is important to use only wood certified by the Forest Stewardship Council (FSC)--the only label recognized as providing "ecologically-sound" timber. Worldwide, FSC-accrediting bodies have certified about 24 million hectares of forests in 45 countries. When consumers demand certified wood, non-certified sellers will have difficulty competing, and illegal logging becomes more difficult. This certification stamp means the wood is from well-managed and environmentally sensitive logging operations. It also assures that the wood is not the result of monoculture plantations, clear-cutting, violations of indigenous land claims, or other environmental hazards. Due to these other considerations, relying on wood labeled "second-growth" is not enough. The FSC label is the only guarantee that the wood purchased is environmentally sound. Currently only a small portion of the U.S. lumber market, FSC wood is growing in popularity in other areas, especially in Europe.

Building large hydroelectric dams destroys forests. Forests are lost when farmers, displaced by dams being built, are forced to move and clear forests in other areas in order to grow their crops. Dams also require road building, allowing access to previously remote areas by loggers and "developers," causing even more deforestation.

Forests are cleared for fuel or export. Crucial to slowing the loss of the world's natural forests is finding alternative sources of energy for low-income countries so that wood is not burned for energy.

"Of all the wonders of nature, a tree in summer is perhaps the most remarkable; with the possible exception of a moose singing "Embraceable You" in spats." Woody Allen

Policies Needed to Halt Deforestation

Despite the creation of new organizations to promote sustainable forestry, and continuing efforts of major international conservation organizations, the rate of forest loss accelerated through the 1990s. In "Requiem for Nature," John Terborgh, says

Deforestation is driven by a wide range of social and economic forces, but underlying them all is the relentless march of *human population growth* and the exponentially rising demand for land and forest products such growth generates. These demands are not going to slacken in the decades ahead; indeed, they will only expand. Slowing down tropical deforestation, much less halting it will therefore entail bucking powerful and inexorably growing forces. It is in this stark light that the prospects for conserving tropical forests must be considered."

If we do not soon change public policy regarding tropical forests, the primary forest will probably be gone sometime before 2045.

LINKS to Forest Sites
American Forests http://www.americanforests.org/
Center for International Trade in Forest Products http://www.cintrafor.org
Defenders of Wildlife http://www.defenders.org/forests/
ForestEthics http://www.forestethics.org
Forest Stewardship Council http://www.fscoax.org
Forest Trends http://www.forest-trends.org
Global Forest Watch http://www.globalforestwatch.org
The Green Guide http://www. Thegreenguide.com
GreenPeace's Forest Campaign http://wwww.greenpeace.org
Heritage Forest Campaign (http://www.ourforests.org)

International Tropical Timber Organization http://www.itto.or.jp
Mangrove Action Project http://www.mangroveactionproject.org
Rainforest Action Network http://www.ran.org/
Religious Campaign for Forest Conservation http://www.creationethics.org/
Save National Forests of Defenders of Wildlife http://www.savenationalforests.org/
Seed Tree (http://www.seedtree.org).
Trees for the Future (http://www.treesftf.org)
UN Food and Agriculture Organization Forest Resources Assessment http://www.fao.org/forestry/fo/fra
US Department of Agriculture Forest and Fishery Products Division http://www.fas.usda.gov/ffpd/fpd.html
World Rainforest Movement http://www.wrm.org.uy/index.html
World Rainforests Information Portal http://www.rainforestweb.org/

FOOTNOTES

http://www.ucsusa.org/global_environment/biodiversity/index.cfm
"Forests & Climate Change - The Facts" From American Forests http://www.amfor.org.
WWF - http://www.panda.org/about_wwf/what_we_do/forests/problems/forest_fires.cfm
January 25, 2000 The International Herald Tribune
Forest Cover Shrinking, Janet Larsen http://www.earth-policy.org/Indicators/indicator4.htm
A database listing locations where you can purchase FSC wood in the U.S. can be found on the web at: http://www.certifiedwood.org. See also GreenPeace http://www.greenpeaceusa.org/forests/.
December 1999 ch.8, "Requiem for Nature", John Terborgh, Island Press