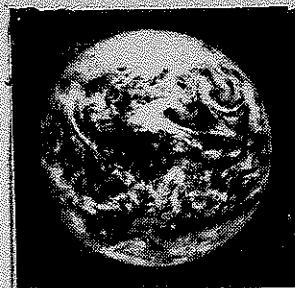


GLOBAL ENVIRONMENT DAY June 6, 1987



Economics for an Ecologically Sound Planet

The environmental movement recognizes the nuclear threat to the ecology and the survival of this planet. It needs also to recognize the threat of inequitable land tenure systems. Many ecologists believe that without international programs which promote just land reforms, no long range programs to save the environment will be successful.

'Many of the international community's widely shared goals-- the elimination of malnutrition, the provision of jobs for all, the slowing of runaway rural-urban migration, the protection of productive soils and ecologically vital forests -- are not likely to be achieved without radical changes in the ownership and control of the land. It is a delusion to think that the basic needs of the world's poorest people will be met without renewed attention to the politically sensitive land tenure question. It is even a greater delusion to think that the dispossessed of the earth will watch their numbers grow and their plight worsen without protesting. The issue of land reform will not go away.'

by Erik Eckholm, Worldwatch Paper #30 *'The Dispossessed of the Earth: Land Reform and Sustainable Development'* also reprinted in Focus, the Journal of the American Geographical Society.

Eckholm continues:

'The economic case for land reform goes far beyond its influence on crop output, important as that is. Broadly shared ownership and agricultural progress together provides the best foundation for the economic development, full employment and political and ecological stability that have so far eluded many Third World nations.'

'Oppressive landownership and tenancy patterns tend to channel national development in directions that are economically and socially and ecologically unsustainable.'

RAIN FORESTS

The loss of our rain forests is an important example of this connection between the ecology of the planet and the lack of a just land tenure policy. In the last few years, the world discovered that it is losing its virgin forests. Yet our major response has been international and national programs to reforest and conserve while the cutting goes on. Yet Norman Myers, author of *'The Primary Source, Rain Forests and Our Future'* contends, 'in principle there is hardly a need to cut down a single tree in a virgin forest.' They are being cut down in large part due to monopolistic land tenure patterns particularly in Latin America.

According to the US News and World Report: "Encroachment on the forest is simply a response to social pressure in parts of Latin America, where 93 percent of arable land is controlled by 7 percent of the population. In Central America some 35 million people are reckoned to have no land or not enough to provide subsistence. So officials look at land currently covered by forests as the answer to overcrowding and poverty." (March 31, 1986)

LAND MONOPOLY

This monopoly of land, usually by absentee landholders, is in good part responsible for not only the poverty which exists in the Third World but also for the degradation of the environment.

Good ecology requires a sound economic approach. We need a radical change. A new ownership system. Perhaps what we need to do is to make land common property again.

This can be done in many ways. In the recent past this has been done by shooting the landlord, confiscating the land or regulating the landowner. In some societies the rights of the community to the land has been established by a tax on the land values. The owner simply pays a fair price for the privilege of exclusive use of natural resources.

A FAIR PRICE FOR PRIVILEGE

The use of the mechanics of the tax system to tax land into use and thus making it the common property of society would mean that we can do away with much of the monopoly of the world's resources. It would also relieve us of the burden of shooting the landlord or confiscating his land. Its an idea that's been in use since ancient times, and has been used in many of the effective land reforms since World War II in Asia.

It is an idea that the environment movement should take note of as it seeks programs that will help us save this planet. For as Henry George said: "Who are we but tenants for a day, have we made the earth that we should determine the rights of those who after us shall tenant it in their turn?"

Briefly then the environment movement should consider:

- 1) the need for a new land ethic - forged from our twin concerns for the land's proper use and its proper care.
- 2) the connections between poverty, hunger and the degradation of the planet.
- 3) the role of the monopoly land tenure systems in creating the conditions which lead to the loss of rain forests etc.
- 4) the needs of the planet together with the needs of the landless of this planet. They cannot be separated.
- 5) the effectiveness of the land value tax as one method of making land common property while permitting private use, and encouraging more careful use of natural resources.

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central Panama, average annual rainfall has dropped by 17 inches in the last 50 years. Some scientists believe that the spreading of the Sahara is due in part to the shrinking of equatorial forests.

There is growing worry also about the contribution of deforestation to the so-called greenhouse effect—or heating of the earth that can occur when fossil fuels and forests are burned and the resulting increase of carbon dioxide in the atmosphere traps solar energy.

The international environmental group Friends of the Earth, in London, predicts that carbon dioxide levels in the atmosphere could double within the next 60 years, eventually warming the earth by as much as 3 degrees Celsius. That may cause a partial melting of polar ice caps and a raising of sea levels—a threat to the one third of mankind that now lives within 35 miles of coastlines.

Poverty and exodus

Of more immediate concern are the waves of emigration unleashed from tropic lands when cleared forests become wastelands. The destruction of Haiti's forests is a primary cause of that island's poverty, which in turn is one reason for the flood of Haitian immigrants to the United States.

"If forests continue to disappear in the Caribbean basin, the U.S. is going to have a constant stream of refugees," warns Norman Myers, author of *The Primary Source—Tropical Forests and Our Future*. Myers says the surge of Haitian immigrants will soon be swollen by those from Dominica and Guatemala, where forests are being cleared away.

"In principle, there is hardly any need to cut a single tree in virgin forests," Myers contends. "Yet the nations of Amazonia [South America] want to get their areas settled. They want to assert their sovereignty."

Encroachment on the forests is simply a response to social pressures in parts of Latin America, where 93 percent of arable land is controlled by 7 percent of the population. In Central America, some 35 million people are reckoned to have no land or not enough to provide subsistence. So officials look at land currently covered by forests as the answer to overcrowding and poverty.

Vast tracts of Central American forest—more than 8,000 square miles a year—are being cleared for cattle grazing to profit from U.S. demand for low-cost ground beef and pet food. Yet new ranches and settlements soon ruin soil fertility with "slash and burn" methods of cultivation. According to a report by Friends of the Earth, "virtually all the ranches established in Amazonia prior to 1978 have already been abandoned."

Elsewhere in the Third World, the simple need for firewood, along with logging by international companies, is denuding forests. Nigeria has lost more than 90 percent of its forest cover, and Ghana 80 percent. Forests along Brazil's Atlantic coast have been cut to less than 2 percent of their former cover. Such traditional timber producers as Malaysia, Thailand and the Philippines face the prospect of soon becoming timber importers because of excessive logging.

"Man is cutting back on the number of choices available to improve the quality of life in the future," asserts Peter Ravan of Missouri's Botanical



As people of Amazon basin are displaced, secrets of plants that can heal and feed the world are lost

Gardens. "A rain forest is a vast storehouse of organisms that can be used for human benefit."

For instance, rain-forest plants and animals are the source of at least one fourth of ingredients for prescription drugs on the market today. The snake-root plant of India's monsoon forests yields the alkaloid reserpine—the base of many tranquilizers. The corkwood tree of eastern Australia provides scopolamine, used to treat schizophrenia. The plant derivative curare, used by Amazon Indians to poison their arrowheads, is an agent for treating Parkinson's disease. Researchers estimate that some 1,400 plants in tropical forests have potential anticancer properties.

It was only in 1970 that botanists "discovered" the winged bean—used by natives of Papua New Guinea for centuries. Now, this plant, superrich in protein, is cultivated in 50 countries throughout the tropics.

Today, American scientists are working to adapt for cultivation a strain of

corn, recently discovered in the rain forests of Mexico's Guadalajara mountains, that is resistant to seven viruses. The corn was growing on a plot of land in the path of development.

A tropical rain forest is nothing less than the planet's biological warehouse. "The diversity is simply staggering," reports William Burley, a World Resources Institute zoologist. Though the popular image is of a jungle scene from Tarzan movies, in fact, the forest floors are surprisingly clear. Just a few yards through the outer brush, the forests open like cathedrals of vegetation supported by columns of trees 200 feet high. Most of the plant life is near the tree-tops, where foliage is so dense that, at noon, only dusklite light filters through. Draped from branches are liana vines as thick as a football player's thigh. And violets grow to treelike dimensions.

Losing a species per day

To destroy the rain forests is to lose 80 percent of the world's vegetation and up to 4 million varieties of life forms, many of whose benefits are yet unknown. As Friends of the Earth warns, "Currently, at least one species a day becomes extinct. By 1990, that will rise to one an hour. Within 15 years, we may have destroyed up to one quarter of all the world's wildlife."

While the international community tries to gear up for a comprehensive effort to save rain forests, some progress is being made in a few countries. In Brazil, where a third of the world's tropical forests are located, the government has set aside 46,000 square miles for natural reserves. The Congo, which derives much of its export earnings from timber that covers 49 million acres, recently planted the 10 millionth tree in a drive to stop deforestation.

In Haiti, now down to a 15-year supply of firewood, farmers are being encouraged to grow trees for timber, not just for subsistence fuel. Four years after the U.S. Agency for International Development provided \$8 million in free seedlings, more than 13 million trees have been planted.

"With care and management, the forests are a sustainable reservoir of immense richness," notes Ronald Van der Geissen of the International Institute for Environment and Development in London. Such notes of hope are tempered, however, by realization that time is running out. As Van der Geissen observes, "It took Western nations 250 years to learn to manage their forests productively. There's no way the tropical rain forests can wait that long." ■

by John Lee in London
and Ronald A. Taylor in Washington



MARK EDWARDS—EARTHSCAN

HORIZONS

Ravage in the rain forests

Loss of 100 acres a minute threatens earth's climate

■ Within 100 years, Siberia could be the breadbasket of the world, New York City might be at the bottom of the sea and one fourth of all species of wildlife may be extinct.

These are among the catastrophic changes that scientists fear are the consequences of the current destruction of tropical rain forests.

Today, these primordial stands of trees are a lush, green girdle around the equator, covering 6 percent of the earth's surface. They are vital to the survival of an estimated 1 billion people in the tropics who depend on the rainfall that the plants catch and release over long periods. And they are important, too, to Americans and to other people of temperate lands because they help to regulate the world's climate.

Once thought to be limitless and expendable, the rain forests now are disappearing at an alarming rate.

Each minute, 100 acres fall to axes and bulldozers. This means that 144,000 acres are

chopped down daily. In a year, an estimated 77,000 square miles—equivalent in size to Nebraska—are flattened.

The hunger for land and timber has erased more than 40 percent of the original rain forests during the past 30 years. If the current pace of exploitation goes unchecked, rain forests will have vanished forever within a few decades. Once the trees are gone, torrential rains erode

the soil, and the land soon becomes like a moonscape where nothing grows.

To try to offset the ravage, the United Nations and the World Bank last year called on all countries to contribute to an ambitious, \$8 billion plan to start thousands of tree-planting and other conservation projects. As yet, however, little money has been committed.

"It may be too late," says the U.N. development plan's chief, Charles Lankester, who explains that even if the projects got immediate funding it would be the turn of the century before further destruction could be halted. "Nature is a pitiless creditor," he says. "The cost of what you don't do today snowballs. The dollar you don't spend this year costs \$5 a year from now."

While governments dither over expense, the loss of rain forests poses dangers for people all over the world. Now, scientists widely accept that rain forests directly influence regional climate and, indirectly, global weather patterns.

For example, in deforested

▲ A few years after the trees have been felled in this lush Peruvian forest, the land will become a desert

▼ Clear-cutting in Amazon region wastes 1 million acres a year and dooms one wildlife species per day to extinction



COLIN JONES—AP/WIDEWORLD