

Deforestation in the Amazon

By Rhett A Butler

Rainforests once covered 14% of the earth's land surface; now they cover a mere 6% and experts estimate that the last remaining rainforests could be consumed in less than 40 years.

One and one-half acres of rainforest are lost every second with tragic consequences for both developing and industrial countries.

Experts estimates that we are losing 137 plant, animal and insect species every single day due to rainforest deforestation. That equates to 50,000 species a year.

There were an estimated ten million Indians living in the Amazonian Rainforest five centuries ago. Today there are less than 200,000.

In Brazil alone, European colonists have destroyed more than 90 indigenous tribes since the 1900's.

The Amazon Rainforest covers over a billion acres, encompassing areas in Brazil, Venezuela, Colombia and the Eastern Andean region of Ecuador and Peru. If the Amazon Rainforest were a country, it would be the ninth largest in the world.

The Amazon Rainforest has been described as the "Lungs of our Planet" because it provides the essential environmental world service of continuously recycling carbon dioxide into oxygen. More than 20% of the world oxygen is produced in the Amazon Rainforest.

Since 1970, over 230,000 square miles of Amazon rainforest have been destroyed in Brazil. Why is Brazil losing so much forest? What can be done to slow deforestation?

Why is the Brazilian Amazon being Destroyed?

In many tropical countries, the majority of deforestation results from the actions of poor subsistence farmers. However, in Brazil only about one-third of recent deforestation can be linked to subsistence farmers. Sixty to seventy percent of deforestation in Brazil can be attributed to land clearing for pastureland by commercial interests, misguided government policies, inappropriate World Bank projects, and commercial exploitation of forest resources.

Brazilian deforestation is strongly correlated to the economic health of the country. During lean times, ranchers and developers do not have the cash to rapidly expand their pasturelands and operations, while the government lacks

funds to sponsor highways and colonization programs and grant tax breaks and subsidies to forest exploiters.

A relatively small percentage of large landowners clear vast sections of the Amazon for cattle pastureland. Large tracts of forest are cleared and sometimes planted with African savanna grasses for cattle feeding. In many cases, land is simply cleared for investment purposes.

Cattle ranches 60-70%
Small-scale, subsistence agriculture 30-40%
Large-scale, commercial agriculture 1-2%
Logging, legal and illegal 2-4%
Fires, mining, urbanization, road construction, dams 2-4%

Clearing for Cattle Pasture

Cattle ranching is the leading cause of deforestation in the Brazilian Amazon. This has been the case since at least the 1970s: government figures attributed 38% of deforestation from 1966-1975 to large-scale cattle ranching. However, today the situation may be even worse.

Between 1990 and 2001 the percentage of Europe's processed meat imports that came from Brazil rose from 40 to 74% and by 2003, for the first time ever, the growth in Brazilian cattle production—80% of which was in the Amazon—was largely export driven.

The reasons for this include the following:

- The weakness of the real also made Brazilian beef more competitive on the world market
- The eradication of foot-and-mouth disease in much of Brazil has increased price and demand for Brazilian beef.
- Road construction gives developers and ranchers access to previously inaccessible forest lands in the Amazon. Infrastructure improvements can reduce the costs of shipping and packing beef.

Subsistence Agriculture

A significant amount of deforestation is caused by the subsistence activities of poor farmers who are encouraged to settle on forest lands by government land policies. In Brazil, each squatter acquires the right to continue using a piece of land by living on a plot of unclaimed public land and "using" it for at least one

year and a day. After five years the squatter acquires ownership and hence the right to sell the land.

Poor farmers use fire for clearing land and every year tens of thousands of fires burn across the Amazon. The land is planted with crops like bananas, palms, manioc, maize, or rice. After a year or two, the productivity of the soil declines, and the farmers press a little deeper and clear new forest for more short-term agricultural land. The old, now infertile fields are used for small-scale cattle grazing or left for waste.

Between 1995 and 1998, the government granted land in the Amazon to roughly 150,000 families.

But severe inequality persists - government figures show that nearly half the arable land in Brazil belongs to just 1% of the population.

And violence has followed this inequality. There were 20 documented killings in 2008 linked to land issues in the Amazon, a survey by the Catholic Church showed. And in 2005, American nun Dorothy Stang was killed in 2005, after she had spent three decades working with peasants and small farmers there.

Infrastructure Improvements

Road construction in the Amazon leads to deforestation. Roads provide access to logging and mining sites while opening forest frontier land to exploitation by poor landless farmers.

Brazil's Trans-Amazonian Highway was one of the most ambitious economic development programs ever devised, and one of the most spectacular failures. In the 1970s, Brazil planned a 2,000-mile highway that would bisect the massive Amazon forest, opening rainforest lands to (1) settlement by poor farmers from the crowded north and (2) development of timber and mineral resources.

The sediments of the Amazon Basin rendered the highway unstable and subject to inundation during heavy rains, blocking traffic and leaving crops to rot.

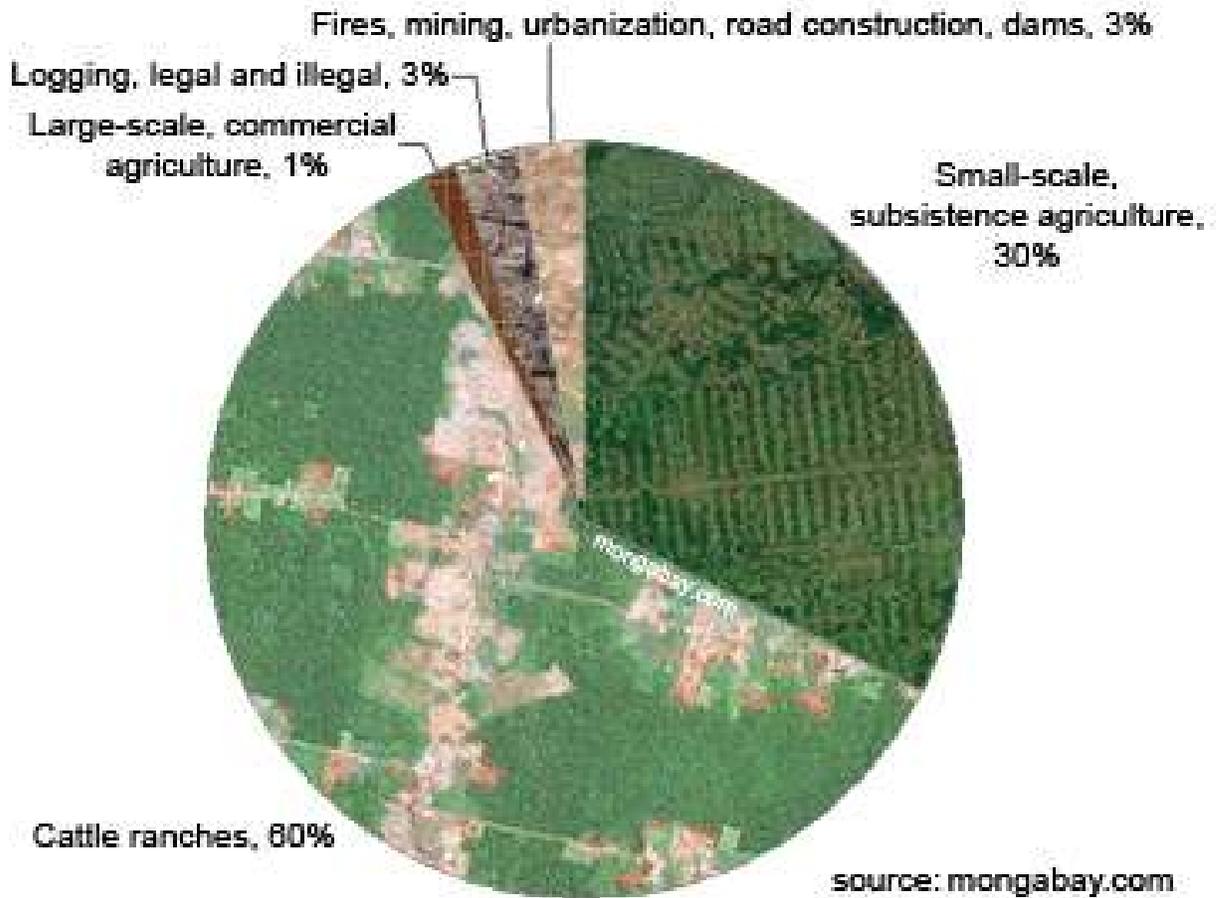
Adding to the economic and social failures of the project, are the long-term environmental costs. After the construction of the Trans-Amazonian Highway, Brazilian deforestation accelerated to levels never before seen and vast swaths of forest were cleared for subsistence farmers and cattle-ranching schemes.

Logging

In theory, logging in the Amazon is controlled by strict licensing which allows timber to be harvested only in designated areas. However, there is significant evidence that illegal logging is quite widespread in Brazil.

Logging in the Amazon is closely linked with road building.

Causes of Deforestation in the Amazon, 2000-2005



Deforestation in the Brazilian Amazon, 1988-2006



What can be done to save the Amazon rainforest in Brazil?

Today Brazil faces an enormous challenge: how to balance economic growth with the preservation of the Amazon rainforest.

1. Rehabilitation and increased productivity of formerly forested lands
2. Expansion of protection areas
3. Development based on concepts of sustainable use of some existing forest
4. Land policy reform
5. Law Enforcement

Destruction of the Amazon Rainforest

<http://www.realityclock.com/statistic.asp?statIndex=66&Uid=1&sponIndex=1>

<http://www.mongabay.com/brazil.html>