A recent article published in the journal Science, based on a study of satellite imagery from the Brazilian Amazon, has shown that the damage done by "selective" logging (in this case, *high-grading* — the destruction of surrounding forests and elimination of certain tree species that comes with loggers targeting only the highest-value timber) has not been previously picked up by observers using satellite images to estimate deforestation. This means that the numbers from the Brazilian government and thus the estimates by the United Nations Food and Agriculture Organization (UNFAO) are too low by half.

For years Rainforest Relief has been stating that high-grading and illegal logging are the key factors driving deforestation in the Amazon, as loggers bulldoze new roads into pristine forests. This allows access to these forests by other destructive industries, such as shifting cultivation, mining and others. This is further corroborated by the most recent study, reported on by numerous news agencies.

Amazon rainforest vanishing at twice rate of previous estimates

· 6,000 sq miles lost a year as valuable trees removed

· Selective logging causing 25% greenhouse gas boost

Alok Jha, science correspondent
Friday October 21, 2005
The Guardian

Transporting illegal logs. Joao Silva for The New York Times

The Amazonian rainforest is being destroyed at double the rate of all previous estimates, according to research published today in the journal Science. The destruction is leaving the forest more prone to fires and allowing more carbon dioxide to be released into the atmosphere, according to scientists.

A new analysis of satellite images of the Brazilian part of the Amazon basin, which forms part of the largest contiguous rainforest on Earth, shows that on average 15,500 sq km (6,000 square miles) of forest is being cut down by selective logging each year. This is besides a similar amount clear-cut annually for cattle grazing or farming.

Conservationists have been able to monitor large clear-cut areas using satellite images. But the extent of selective logging, where individual trees of high value, such as mahogany, are felled and smuggled out of the forest, had been unclear, the effects being masked from satellites by the forest's dense canopy.

"People have been monitoring large-scale deforestation in the Amazon with satellites for more than two decades, but selective

logging has been mostly invisible until now," said Gregory Asner, of the Carnegie Institution, Washington. He tackled the problem by developing an analytical method named the Carnegie Landsat Analysis System, which allows each pixel of an image to be scrutinised for the amount of forest left to determine the overall ratio of forested to deforested land.

Natalino Silva, of the Brazilian Agricultural Research Corporation, said: "We can now see what's happening from the top of the forest all the way to the soil. We have a whole new picture of the Amazon region and selective logging."

The analysis revealed some surprising facts. "We discovered that annually an area about the size of Connecticut is disturbed this way," said Professor Asner. "Selective logging negatively impacts many plants and animals and increases erosion and fires. Additionally, up to 25% more carbon dioxide is released to the atmosphere each year — above that from deforestation — from the decomposition [of plant material] that the loggers leave behind. Timber harvests are much more widespread than previously thought."

Using images of the Amazon basin taken from 1999 to 2002, Prof Asner studied the five states that account for 90% of deforestation. The extent of selective logging was found to be between 4,685 and 7,973 square miles each year.

Michael Keller, of the US Forest Service, who was the co-author of the research, said: "We expected to see large areas of logging, but the extent to which logging penetrates deep into the frontier is much more dramatic than we anticipated."

A large mahogany tree can fetch hundreds of dollars at the sawmill, making it a tempting target. "People go in and remove just the merchantable species from the forest," said Prof Asner. "Mahogany is the one everybody knows about, but in the Amazon there are at least 35 marketable hardwood species, and the damage that occurs from taking out just a few trees at a time is enormous."

About 400m tonnes of carbon enter the atmosphere every year because of traditional deforestation in the Amazon, and Prof Asner estimates that an additional 100m tonnes of carbon occurs through selective logging. "When a tree trunk is removed, the crown, wood debris and vines are left behind to decompose, releasing carbon dioxide gas into the atmosphere," he said.

A thinned canopy also makes the forest more dry and prone to fire. "On average, for every tree removed, up to 30 more can be severely damaged by the timber harvesting operation itself," said Prof Asner.

What can you do about this problem? Don't buy products made with tropical hardwoods, which are typically used in indoor and outdoor furniture, doors, windows, flooring, decking, tool handles, plywood and even pencils. Take our Rainforest Safe™ pledge.

Contact your local officials and encourage them to pass a resolution to end any current or future use of rainforest woods by your town.

Join or volunteer with Rainforest Relief and support our work to stop companies and governments from using rainforest woods. Contact us today.

Exposing and Challenging Rainforest Consumption

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