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Brazil Demonstrating that Reducing Tropical Deforestation is Key Win-Win Global Warming Solution

Tropical deforestation is the source of nearly a fifth of annual, human-induced emissions of heat-trapping gases to the atmosphere. Recent studies by Woods Hole Research Center scientists demonstrate that during years of severe drought, tropical rainforest fires can double emissions from tropical forests. Now, an international team of forest and climate researchers has found that halving deforestation rates by mid-century would account for 12 percent of total emissions reductions needed to keep concentrations of heat-trapping gases in the atmosphere at safe levels. This work is profiled in a recent issue of *Science*.

A policy mechanism is needed that rewards those tropical nations that succeed in lowering their emissions of heat-trapping gases from deforestation and forest degradation. This is a particularly urgent need since most of these emissions are associated with only modest economic gains, but provoke high losses of biodiversity. Such a policy mechanism is now under discussion in the UN Framework Convention on Climate Change. The "Compensated Reduction" of greenhouse gas emissions from tropical forests (CR) would provide payments to those tropical nations that succeed in lowering their emissions from deforestation and tropical degradation, beginning during the second compensation period of the UNFCCC (beginning 2013). This proposal has now been endorsed by the Coalition for Rainforest Nations, which currently represents 29 tropical countries who support the CR proposal, and which formally advanced the CR proposal during the Conference of the Parties in Montreal, 2005, and will be voted on by the UNFCCC delegation in Bali Conference of the Parties in December.

"More than any other country, Brazil has demonstrated that it is feasible to reduce greenhouse gas emissions from tropical deforestation", says co-author Daniel Nepstad, Senior Scientist at the Woods Hole Research Center. He, along with colleague Marina Campos, showed that since the beginning of 2004, Brazil has created more than 20 million hectares of parks, extractive reserve, and national forests in the Amazon region, and many of these protected areas are located in the agricultural frontier. These protected areas, if fully enforced, will prevent one billion tons of carbon from being transferred to the atmosphere through deforestation by the year 2015. Brazil's deforestation rates have been cut nearly in half in recent years through a combination of government intervention and economic trends.

"We are encouraging the Brazilian government to fully endorse the Compensated Reduction proposal", states Paulo Moutinho, Scientist and Coordinator of the Climate Change Program of the Amazon Institute for Environmental Research (IPAM), a non-governmental research institute in Brazil. CR would help Brazil offset the costs of slowing deforestation rates. In Brazil, the cost of reducing deforestation emissions by half will be less than \$5 per ton of carbon dioxide, as estimated in an unpublished study of IPAM and the Woods Hole Research Center.

The CR proposal may be far more urgent than the *Science* paper would suggest, since tropical deforestation rates will probably increase in the coming years as worldwide demand for biofuel and grain pushes agriculture deeper into tropical forests.

"Slowing tropical deforestation won't, by itself, solve the climate problem," said Dr. Peter Frumhoff, co-author and organizer of the study and Director of Science and Policy at the Union of Concerned Scientists. "But for many developing countries, it is their largest source of emissions. Climate policymakers have a historic opportunity to help developing countries find economically viable alternatives to deforestation and participate in the global effort to address climate change."