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New Report Addresses Challenges and Opportunities for the Future of the Amazon Rainforest

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Large-Scale Reductions of Carbon Emissions from Deforestation and Forest

A new report warns that the combined action of deforestation and climate change represents a serious threat to the Amazon region, and that destruction of the Amazon rainforest will, in turn, speed climate change, will be released on Friday, November 17 (see report link in sidebar, right). The paper does highlight, however, that there are important opportunities to reduce deforestation and forest degradation in the Amazon that will substantially reduce greenhouse gas emissions, while stemming the loss of biodiversity, and cultural disruption. The report was written by scientists at The Woods Hole Research Center (WHRC), the Amazon Institute of Environmental Research (IPAM), and the Federal University of Minas Gerais (UFMG) and is being released in conjunction with the United Nations Framework Convention on Climate Change 12th Conference of the Parties currently underway in Nairobi, Kenya.

Deforestation alone already generates about one fourth of greenhouse gas emissions, contributing to climate change at regional and global scales. These emissions are even larger when severe droughts occur, usually in association with El Niño events and other ocean surface temperature anomalies. This type of climatic event may become more frequent and intense in a warming world. According to Daniel Nepstad, a scientist with WHRC and IPAM, "When El Niño interrupts rainfall patterns, tropical forests become more susceptible to fire." For example, in 1998, a strong El Niño event causes severe drought in the Amazon and southeast Asia that provoked fires in peat forests of Indonesia that released 0.8 to 2.6 billion tons of carbon to the atmosphere, doubling emissions to the atmosphere from that year. Forest fires released 0.1 to 0.3 billion tons of carbon to the atmosphere from the Amazon in 1998.

In 2005, climatological analyses indicate that an anomalous heating of the tropical North Atlantic that was responsible for the large number of hurricanes along the eastern coast of North America, including Katrina that hit New Orleans, also appears to be responsible for the severe Amazon drought of that year, damaging or killing many Amazon trees. Tropical deforestation should increase in the coming decades, since many countries that currently provide most of the world's agricultural commodities are running out of land for agricultural expansion. This expansion will proceed mainly in tropical forests in the coming years, driven by the growing demand for biofuels and animal ration worldwide.

Despite the concern with the accelerating pace of deforestation, the report states that deforestation can be reduced if governments are compensated for their efforts to control forest loss. In the last two years, the Brazilian government and civil society demonstrated that it is possible to reduce the loss of tropical rainforests when political will is combined with innovative ideas and broad political



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support. With support from the Brazilian military and federal policy, hundreds of people were arrested or jailed because of their illegal logging and forest clearing. "Amazon deforestation fell 50% in the last two years in part because of the tremendous efforts of the Brazilian government", states Paulo Moutinho, a scientist at IPAM.

In 2004 and 2005 the Brazilian government created 240,000 square kilometers of new protected areas, including many areas concentrated in the zone of active agricultural expansion. These new protected areas will have an important effect on future emissions of carbon to the atmosphere, predicts Britaldo Soares, professor at the UFMG. He says, "We have calculated, through our computer modeling system, that these new protected areas may reduce Amazon carbon emissions through 2015 by approximately 0.6 billion tons."

The report concludes that one of the best ways to reduce tropical deforestation and associated greenhouse gas emissions is in the context of the United Nations Framework Convention on Climate Change (UNFCCC). The authors argue that the possibility of compensating nations for voluntary reductions of their greenhouse gas emissions from tropical forests is one of the most promising approaches to conserving tropical forests and achieving global greenhouse gas emissions targets. This proposal, called "Compensated Reduction," was first presented in the UNFCCC meetings by these institutions and their collaborators, including Instituto Socioambiental and Environmental Defense, at the ninth "Conference of the Parties" in Milan, in 2003.

Since then, some crucially important initiatives that incorporate the concept of compensated reduction are gaining traction within UNFCCC negotiations. These include proposals led by Papua New Guinea and Costa Rica and, more recently, a Brazilian proposal calling for incentives from developed countries to reduce deforestation. With this proposal, Brazil provides an important step in international discussions about climate and demonstrates that it is preparing to face its substantial greenhouse gas emissions resulting from deforestation. Brazil's President Lula announced his support for the proposal on November 10, 2006.

On behalf of the report's authors, Dr. Nepstad offers a concluding perspective: "A mechanism for compensating nations that reduce their deforestation only makes sense if the developed countries assume obligatory targets for GHG emission reduction that are far more ambitious than those agreed upon within the Kyoto Protocol. "