
University of Pennsylvania
Institute for Environmental Studies

presents

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Winrock International



Tropical Deforestation and Carbon Credits

Deforestation and forest degradation in developing countries significantly impacts the accumulation of greenhouse gases in the atmosphere. If the emissions of methane (CH₄) and nitrous oxide (N₂O) are considered in addition to carbon dioxide (CO₂) emissions, annual emissions from deforestation and degradation during the 1990s and 2000s accounted for about 20% of the total anthropogenic emissions of greenhouse gases to the atmosphere. Although tropical deforestation and forest degradation are significant contributors to total greenhouse gas emissions, activities to reduce such emissions are not accepted for generating creditable and marketable emissions reductions under the Kyoto Protocol. However, in the past two years or so, developing countries have united and proposed that with incentives such as carbon offset markets there are large opportunities to reduce these emissions.

Under a reduction in emissions from deforestation and degradation (REDD) mechanism, countries will need to show credible reductions in emissions measured against a baseline at specific intervals in time—that is REDD is a performance-based mechanism. Monitoring is crucial as it will show the success of REDD policies and interventions measured as reduced emissions against a baseline. Methods of accounting for changes in forest carbon stocks from activities related to forest clearing and degradation are extensively reviewed, well established, and tested, and presented in various IPCC reports. Credible estimates and patterns of deforestation rates for most tropical countries can be obtained from satellite observations since the 1990s. However, estimates of the carbon stocks and their change resulting from deforestation and degradation are less well known, but estimates exist derived from a variety of sources and reported as default values in the IPCC methods manuals. Satellites can provide consistent, transparent, and cost-effective measurements of forest cover and change in high spatial and temporal detail over large geographic areas in the tropics. And, advances in digital aerial imagery combined with field measures of key metrics for developing new allometric equations result in cost-effective accurate and precise measures of forest carbon stocks. For the REDD mechanism to become a reality, the developed world need to make a commitment to assist developing countries increase their capacity to acquire and analyze the required data and tools.

Date: February 13, 2008

Time: NOON - 1:30 pm

Place: Carolyn Hoff Lynch Auditorium

On the Penn campus: Chemistry Building
34 & Spruce Sts. (enter on 34 St)

NO REGISTRATION REQUIRED

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