

Near-term decisions on the design of forest-based climate mitigation policies and their long-term impacts on tropical forests

Peter Frumhoff
Union of Concerned Scientists
Cambridge, Massachusetts

What impacts will carbon crediting under the CDM have for afforestation and reforestation in tropical forests? What impacts will carbon market incentives to alter industrialized country forest management practices have on tropical forests? And what are the options for ameliorating any negative impacts from carbon crediting and market incentives?

Half a percent to 1% of forests in the tropics are lost each year due to land use change. About 20% of global carbon dioxide emissions annually come from tropical deforestation, which is comparable to the emissions from coal or oil or natural gas (see figure 1).

[Insert slide 5 from Powerpoint as fig 1]

While slowing deforestation is often thought of as a key component of international efforts to mitigate climate change, the potential for reducing emissions from deforestation under the CDM is actually quite modest compared to the overall reduction targets of the Kyoto Protocol (see figure 2). Thus, from a carbon emission perspective, CDM is not a magic bullet. However, it is a potentially major source of new funding to help developing countries conserve their forests (see figure 3)

[Insert slides 7 and 8 from Powerpoint as figs 2 and 3]

At the follow up meeting to COP6 (COP6bis), a draft set of decisions was made regarding forest-based climate mitigation. These decisions codified a set of principles to apply to all Articles of the Kyoto Protocol. Some of the key principles include:

- that implementation of LULUCF activities contribute to biodiversity conservation and the sustainable use of natural resources.
- that reversals of a removal of carbon from the atmosphere be appropriately counted (the permanence issue).
- that windfall effects be excluded from accounting (from "elevated CO₂ concentrations above their pre-industrial level, indirect nitrogen deposition, and the dynamic effects of age structure resulting from activities and practices before the reference year."

The COP6bis draft decision also defined the terms forest, afforestation and deforestation on the basis of changes in land use for Articles 3.3 and 3.4 but etc. but does not provide definition for LULUCF activities for Article 12 (CDM). The draft decisions also established 4 broad categories of eligible Article 3.4 activities in industrialized countries ("forest management," "cropland management," "grazing land management," and

"revegetation") and set negotiated limits (caps) on credits for forest management for 2008-2012 (the first commitment period). Future periods were left open.

In addition, SBSTA was tasked with developing "definitions and modalities" for afforestation and reforestation in the CDM, "taking into account issues of non-permanence, additionality, leakage, scale, uncertainties, and socioeconomic and environmental impacts, including impacts on biodiversity and natural ecosystems," for a decision by COP9. CDM project consistency with "sustainable development" is to be determined by host Parties.

The set of decisions also "invites" the IPCC to elaborate methods for measuring and reporting changes in carbon stocks and to prepare a report on "good practice guidance" by COP9 and guidance on "practicable methodologies" for factoring out windfall effects by COP10.

Concern was raised by many environmental NGOs that CDM crediting for afforestation and reforestation could accelerate expansion of industrial plantations in developing countries and accelerate deforestation and/or slow natural forest regeneration. However, other factors keep this from being a major concern on the large scale. In most tropical regions, plantations exist in large part due to government subsidies for their creation. Through 2010, the global supply of plantation wood on the market is projected to massively increase and depress prices. Additional plantations will likely aggravate the poor market outlook for tropical plantation products. In general, only increased subsidies will encourage more planting.

But will the price of carbon serve as a sufficient "subsidy" to encourage more planting, even to the extent that it offsets an increasingly poor future market? Alternatively, will carbon crediting primarily serve as a substitute for government subsidies (i.e., the subsidy incentive to plant remains the same, only the source of the subsidy changes) and therefore not alter current land-use dynamics?

Some precautionary policymaking is in order and it is possible to craft sound rules to address these concerns. Near-term rules for governing the CDM will deal with additionality and prohibit crediting for plantation on areas of recently cleared natural forests. In the longer term, there is a need to bring developing countries into the capped regime.

Might timber harvests be relocated from industrialized countries to developing countries as a result of CDM? In the context of a carbon market, we can ask:

- At what price will timber harvests slow in industrialized countries?
- What is the substitutability between timber supplies from industrialized and developing countries, and what are the roles of plantation and natural forest sources?
- If timber harvests do shift, what will be the potential impacts on natural forests and on the atmosphere?

Once again, there is a need for policymaking and environmental standards to prevent unintended and negative consequences of the policies on the atmosphere and elsewhere. Though we can't predict the future, rules can be put in place to prevent the worst scenarios from occurring.