**Beyond Safeguards: A Critique of Carbon Markets for REDD+**

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From Indonesia to Mexico, members of indigenous and forest communities have marched in protest against market-based strategies for climate change mitigation in forests. In particular, they have expressed concern about how forest-based carbon offsets associated with REDD+ may affect their land rights and access to resources. REDD+ aims to Reduce Emissions from Deforestation and Degradation (REDD) in developing countries, but also includes sustainable forest management, and the conservation and enhancement of carbon stocks (the plus). In response to critiques over REDD+ and the possible harm and exclusion it may bring to marginalized groups, a variety of social and environmental safeguards have been proposed to prevent negative outcomes and ensure equitable social benefits. [REDD+ Social and Environmental Standards](http://www.redd-standards.org/) outline a set of principles to guide the development of safeguards, which will ultimately rest in the domain of domestic law, including free prior informed consent, local participation, and the protection of indigenous land rights. While safeguards are well meaning, I argue that the market structure they are tied to is likely to undermine them, for it consistently privileges land uses based on market value over the social needs of people within communities. The focus on safeguards has been misplaced. Instead, we need to pay attention to the finance mechanism of REDD+, particularly where it is reliant on a carbon market.

Offsets for REDD+ are now being negotiated for California’s carbon market, and if this process goes forward it could lock in a market mechanism for climate change mitigation in forests more broadly. While I applaud the California Air Resources Board for taking action on climate change within the state, I have major concerns about a recent proposal to enroll forestry-based mitigation strategies into the California carbon market. I have been working on these issues for over a decade, and initially saw some hope that carbon markets might have positive impacts on Guyana’s rainforests (Osborne and Kiker 2005). But grounded ethnographic research into these questions in Chiapas, Mexico, has led me to a very different set of conclusions.

The carbon market has been adopted as the primary financial mechanism for reducing greenhouse gas emissions, based on a troublesome assumption about efficiency: that the carbon market can and will reduce emissions at the lowest cost. Therefore, when the carbon market enters forest ecosystems, it targets land uses of low market value or opportunity cost (cost of the forgone alternative), which in many developing countries is derived from subsistence needs. Within an early program that intended to lay the groundwork for REDD+ in Chiapas, subsistence activities were constrained while production of African oil palm and jatropha for biofuels not only continued unabated, but received subsides from the state. Based on evidence from Chiapas on carbon forestry and early pseudo-REDD+ activities, I argue below that a market framework privileges exchange value – land uses which have value in the market (timber and biofuel production) at the expense of use value – land uses that meet social needs (subsistence production). Operating within the framework of a carbon market, therefore, can limit the desired benefits of many smallholder carbon producers for which subsistence production has important livelihood and cultural significance.

*Forest-based Activities and the Voluntary Carbon Market*

My concern about the privileging of the market over social values of land within the framework of the carbon market comes from findings based on interviews and observations in Frontera Corozal, a Mayan community in the Lacandon Jungle of Chiapas. In Frontera Corozal, community members have over a decade’s worth of experience participating in carbon forestry activities. In 2002, approximately 20 farmers entered the Scolel Té carbon forestry project, a highly regarded offset program for promoting smallholder participation in afforestation, reforestation and forest conservation activities, which generate carbon credits for the voluntary carbon market. Although the project was founded on the goal of providing local development benefits, research by Nelson and de Jong (2003), indicate that the Scolel Té project shifted dramatically at the point of commercialization, where the diversity of eligible activities was reduced, and more emphasis was placed on calculating credits and minimizing costs than on designing projects with the types of benefits small farmers had in mind. For example, timber species with greater market value were prioritized over fruit trees with greater social value for many in the community. In Frontera Corozal, the main timber species planted have been mahogany and tropical cedar because these are species with high market value. As carbon payments are low and irregular, carbon producers consider the main financial benefit of the project to be future revenue from selling timber, not the meager remuneration for stored carbon.

However, farmers were uncertain about their ability to reap the full benefits from selling timber due to a number of risks, including pest damage, increased fire in the region, the long time horizon associated with timber production and contradictions with local forest governance. While farmers are in theory allowed to cut trees provided they can prove they planted them, getting the necessary cooperation of community authorities can be challenging. This is because rules associated with the carbon project, which permitted the cutting of trees for exchange, were at odds with those of the community that only allowed harvesting trees for domestic uses (e.g. using timber to build a house for oneself or family, not for sale on the market). In essence, due to these real risks associated with timber production, the inability to generate sufficient income from the carbon project has limited the socio-economic benefits that can be derived for smallholders. What many carbon producers actually desired, however, were payments for maintaining and even extending the fallow period of the *milpa*, a system of subsistence food production and land management found throughout much of Mesoamerica.



Pest damage to trees in carbon project (Photo credit: T. Osborne)

*The Milpa*

The milpa has significant cultural, social and economic significance for many Mayan groups, including the Chol Maya of Frontera Corozal. Corn plays an important role in Chol lives and livelihoods. In fact the word Chol itself means corn, or grower of corn. The milpa is a system of shifting cultivation, where corn is grown in one place for a few years, followed by fallow periods of up to 20 years (see Nations and Nigh 1980 on milpa practices of Lacandon Maya in the region). The fallow is managed and planted with fruit and other trees with high use value. Fallow areas are also an early stage of secondary forests, which many studies suggest exhibit rapid recovery of biomass and biodiversity in southeastern Mexico (see Bray and Klepeis 2005). However, despite the cultural, socio-economic and ecological benefits of the milpa under certain circumstances, subsistence production in this system has been de-emphasized within the context of the carbon market. This trend seems to have continued now that carbon producers participate in a forest program intended to set the stage for REDD+.



The milpa (Photo credit: T. Osborne)

*Pseudo REDD+ in Chiapas*

In 2011, Juan Sabines, then governor of Chiapas began providing payments of $2000 pesos (approximately $160/month) to members of Frontera Corozal and other indigenous groups of the Lacandon Community to keep forests intact. While the payments were disbursed in preparation for REDD+, they were derived not from any official carbon market or fund, but from a vehicle tax within Chiapas. Nevertheless, as REDD+ is expected to be implemented under a nested jurisdictional approach, the way the project has been interpreted in Chiapas provides important insights into a future state-wide official REDD+ program.

Community members relayed that in order to receive the $2000 pesos, they were prohibited from using fire to prepare the milpa or cultivate fallow plots beyond five years of regrowth. This constrained the length of the fallow, which has important social value for many in the community as well as ecological value in terms of building soil fertility (see Diemont et al 2006). Community members feared more severe sanctions and monitoring around land use by the newly formed Ecological Police, and consequently some reduced their cultivation in the milpa. Many have also become more dependent on U.S. corn purchased on the local market since the North American Free Trade Agreement (NAFTA) has allowed for the importation of cheap subsidized U.S. corn, with which local producers have been unable to compete.

While subsistence production is one of many causes of land use change -- which also include timber extraction, cattle ranching, and agricultural expansion for biofuels -- milpa-based farming appears to be the only land use targeted under the informal version of REDD+. This is precisely because within a market calculus, subsistence production carries the least opportunity cost. Since milpa is mainly for subsistence production, the opportunity costs of replacing the milpa with cheaper U.S. imported corn is significantly lower when compared to other, and arguably more ecologically destructive land uses such as biofuel production that generates greater private income and state revenue. Payments to land rights holders in the Lacandon Community have now ceased, ending when Sabines left office in 2012.

*A Way Forward: Carbon Tax and Green Fund for Forests*

According to Karl Polanyi, nature is a fictitious commodity that has social and cultural importance outside the market. Attempts toward commodification, he also suggested, can unleash ecological devastation and social dislocation. Therefore, in order to mitigate these volatilities, I suggest creating a Green Fund for Forests, generated through a carbon tax. A number of countries have already put forth proposals for carbon funds. The Clean Development Mechanism was initially proposed as a fund by Brazil, for example. It would have been generated from fines levied against industrialized countries that failed to meet their emissions targets – this fund was later converted into a market mechanism. In 2009, former Mexican President Felipe Calderón proposed a global fund to fight climate change – a “Green Fund” to support clean development and adaptation on a large scale. Designed appropriately, such a fund may provide a more equitable financial mechanism for managing forest-based activities.

The Green Fund for Forests could be generated through a simple carbon tax. According to a recent [article](http://www.nytimes.com/2013/01/30/business/energy-tax-is-underused-tool-in-climate-change-fight.html?_r=0) in the *New York Times*, “Top economists agree a tax on fuels and the carbon they spew into the atmosphere would be the cheapest way to combat climate change”. Earlier this month, Democrats in Congress proposed a federal carbon tax on fossil fuel emissions, the revenue of which could help balance the budget as well as be distributed to the public. California already has a gas tax equivalent to approximately $46.50 per ton of CO2. Increasing this tax (protecting poorer residents through compensation programs–see [Brookings Institution report on the carbon tax](http://www.brookings.edu/research/papers/2013/02/benefits-of-carbon-tax) -- or diverting some of the revenue toward a Green Fund for Forests might more effectively reduce forest-based emissions while meeting the social needs of small farmers in places like Chiapas. In that case, benefits would be de-coupled from requirements of a carbon market.

In conclusion, interrogating finance mechanisms is central for understanding the opportunities and limits of forest-based climate change mitigation strategies for indigenous communities such as those in Frontera Corozal, many of whom deeply value the land and its processes in ways that fall well outside the realm of commodification. Therefore, while safeguards can be seen as an attempt to protect communities from the vagaries of the market, in the context of a market mechanism they are likely to be highly insufficient. Therefore, a well-designed fund may be the most appropriate mechanism if we are serious about safeguarding the rights of indigenous and forest communities, and if we are to listen to Polanyi’s prescient words.

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