

On the Need to Redesign the CDM Carbon Trading Program

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Carbon trading, as institutionalized in the Clean Development Mechanism (CDM) program, has emerged as the foremost policy instrument for reducing worldwide greenhouse gas emissions. We argue, however, that the CDM is due for a serious overhaul.

The CDM program involves the purchase of carbon credits by interests in Annex I countries (i.e., industrialized nations) by partially financing, through a marketable carbon credit, carbon storage projects in non-Annex I countries (i.e., developing nations). About 2,229 CDM projects have already been registered with the CDM committee as of June 4, 2010 (1).

CDM was designed upon assumptions that underpin all tradeable emissions instruments and derive from the economist, Ronald Coase:

- Externalities can be internalized by creating a new form of property right.
- Trading regimes work best when transaction costs are reduced to a minimum.
- The trading regime is most effective when globalized, such that any two actors (buyer, seller) from any points in the globe can transact. The larger the pool of actors, the more the gains from perfect competition.

However, the CDM program has come under increasing criticism. Much of the critique revolves around the inherent difficulty of ascertaining additionality—i.e., the goal of increasing real carbon emissions beyond the no-CDM baseline scenario. Critics claim that many CDM projects would have been carried out anyway, regardless of the CDM subsidy (2). A second criticism pertains to the other goal of the CDM, local sustainable development. As the literature points out, in practice, little attention is paid to the sustainable development criterion and much more to maximizing a project's certified emission reductions (CERs) (3).

We have studied problematic carbon trading projects all around the globe and find certain dimensions of conflict that run through many of these. In Figure 1, we map a sample of four projects that are rather emblematic of these aspects of conflict.

1. Scale Issues. Although the development literature is replete with accounts of how smaller-scale carbon-offsetting projects can cohere with local development, CDM project proponents seek to increase the return on investment by maximizing project scale (and, hence, CERs). Moreover, the additionality criterion promotes projects that are financially marginal—in these cases, the inclination to seek economies of scale is even greater. An example of this is the Bhilangana Hydropower project in Ghansali village, Uttaranchal State, India, where project planners settled on a medium-scale, 22.5-MW, run-of-the-river project. Even this scale of project begins displacing local activities. The project rerouted water away from what was up to then a sustainable, terraced, irrigation system for community farming. Residents fought the project and, in one instance, thirteen protesters were beaten and arrested.

2. Implementation Dilemmas. Lack of coherence with local activities invariably leads to conflict, which can threaten the sustainability of the project. This stands in stark contrast to the Coasean assumption of low transaction costs. Conflict is a very real and unanticipated “cost” (to wit: no CDM Project Design Document ever mentions community protest). A striking example is the Mt. Elgon Carbon Forest Project, which involves the reforestation of 25,000 ha of degraded forest in Uganda. The large scale of the project inevitably meant relocation, through forced eviction, of at least 800 indigenous families. Subsequent protest by the residents was accompanied by violent action by paramilitary forest rangers. In response, some protesters set fire to the project. In 2003, a 4-km strip of eucalyptus was razed overnight, and in 2004, 45 people were arrested for purportedly burning down 1,700 more trees (4).

3. Unforeseen Externalities. Marketable emission credits are supposed to capture and ‘internalize’ all externalities

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FIGURE 1. Conflict-ridden carbon trading projects.

into the tradeable good. However, we have found that the mere exchange of carbon from one location to another itself generates new externalities. This is a common side-effect of many projects. The most dramatic example of this is the Campo Novos Dam, a massive 880-MW hydropower project in Brazil being processed for CDM project approval. As in the previous examples, conflict with community was great. Three thousand people were displaced (mostly uncompensated), police violently suppressed local protest, and ten leaders of the Dam-Affected Peoples' Movement were jailed. Most unexpectedly, cracks in the dam emerged and, in 2006, resulted in the uncontrolled release of 1.47 billion m³ of reservoir water.

4. Institutional Misfit. Finally, the recondite institutional design of the tradeable market instrument can run counter to local institutions. An example of this is the La Venta wind farm project in Oaxaca, Mexico, an 83.3-MW wind farm consisting of 98 wind turbines on land leased from local farmers.

The ideal of the carbon market regime is free trade, where low-transactions-cost trades are facilitated between individuals in different corners of the globe. In interviews we conducted at La Venta, local farmers complained that the contractual arrangements were onerous—e.g., restriction clauses were not clearly stated and many farmers were surprised to learn of liens placed on their lands by the contracts, such as expropriation of land or automatic renewals of lease agreements. Most lessor farmers did not even receive copies of the contracts. Residents claim that the project was imposed on the community using a divide-and-conquer strategy in a locale where the traditional property regime is the ejido, a system combining individual and communal property rights.

This negotiating strategy split the community down the middle (i.e., 35 out of 60 ejidatarios chose to lease their land to the wind farm, while the others refused). It also seemed to create a monopsony-like condition (i.e., one buyer, many sellers), which drove down monetary compensation to the residents to a meager \$Mx 5000 per turbine.

As these examples suggest, the Coasean assumptions are not even approximately met in practice. Transferring carbon generates new externalities, the tradeable market instrument flouts local institutions, and CER buyers can act like monopsonists. The beautifully recondite economic logic of these tradeable market instruments fosters revenue-maximizing (and, by extension, CER-maximizing) tendencies that

lead to projects too large in scale to benefit local residents and, in fact, displace them.

If the CDM program is to continue beyond the post-2012 Kyoto commitment period, a number of institutional reforms are requisite:

- 1 Rather than the current practice of individual negotiations between Annex-I project proponents and individual hosts, have local or regional authorities function as boundary agents that oversee such negotiations. This offsets the weak bargaining position of individuals in recipient communities and internalizes local institutional considerations.
- 2 Rather than having projects let on a project-to-project basis, have negotiations revolve around a suite of CDM projects that a region would pursue over a period of time. This not only allows the community to deliberate on these projects as a community, but has the secondary advantage of allowing Annex-I project proponents access larger pools of CERs without pushing the scale of individual projects beyond that which is locally sustainable.
- 3 Rather than having project proponents have complete purview over project implementation, assign a formal monitoring role to the local community, which inherently has a direct stake in ensuring both additionality and sustainable development. Local actors are also in the best position to know whether projects are really additional or whether they are simply old wine in new wineskins.
- 4 Third-party intermediaries can include fiscalizers—agencies, persons, or firms who can determine whether the financial profile of the projects are reasonable or not (and, thus, additional). This can avoid problems such as the CDM Executive Board's disallowing wind farming projects from China, mainly due to doubts about the financial calculations justifying them. This also should reduce the common practice of overstating a project's estimated CERs.
- 5 Lastly, and most importantly, have a Community Benefits Agreement be a formal requirement for CDM project approval. This can be laid out in the Project Design Document and formalized in the agreement between contracting parties. Without such a formal instrument, the local sustainable development goal of the CDM program will remain vague and nonoperational.

In short, the guiding ethic should not be free trade, but fair trade. If CDM cannot be overhauled, then the logical

recourse is to replace it with the most obvious alternative: setting an across-the-board carbon tax on Annex I emitters and using the funds to support carbon-offsetting projects in the developing world.

We need to move beyond the simplistic, idealized market regime of one-stop-shop transactions between individual buyers and sellers. Simple institutional designs may not be equal to the challenge of complex socio-ecological conditions. Transaction costs can still be minimized not by reducing the scope of responsible deliberation, but by examining suites of projects, by sharing technology and local knowledge, and by reducing the degree of conflict that can delay or undo carbon-offsetting projects. The global community, including both Annex I and non-Annex I nations, has a great interest in the critical appraisal and institutional reform of the CDM program.

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