Roundtable: tenure and climate change

Bioenergy production: An emerging challenge in Africa *Photo: E. Mansur*

Bioenergy markets

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Four key variables drive the economics of biofuel production:

1. the price of oil (the main substitute);
2. the cost of the feedstock (50–80% of the variable cost);
3. the conversion technology; and
4. regulations, which stimulate demand.

At present, all four of these variables are in a state of flux.

The global financial crisis—the credit crunch and the fact that the price of oil went through the floor—has had a dramatic effect on global biomass financing. Almost no bioenergy investment makes sense unless oil is US$70 per barrel. We think it will go back up there so we will see investments coming back.

Europe has adopted aggressive renewable energy targets—20% of its energy needs must be met from renewables by 2020, of which two-thirds is likely to come from biomass. To meet this objective, Europe could have a wood deficit of 320–450 million m^3 per year; to put this in perspective, Canada harvests about 200 million m^3 per year.

Right now, Europe is a large wood vacuum. Pellets are coming in from Canada and to a lesser extent from Australia and the United States; there are huge, untapped sources in Brazil, Asia and Africa.

Convergence of the markets for fuel, food and fiber is likely to continue. By convergence we mean that feedstocks will come together and will trade on the basis of their energy equivalency. The expected rise in fuel, food and fiber prices will trigger changes in land-use patterns.

Historically, land has been kept under forests for two main reasons:

- owners want the production of some non-market good or service; or
- the land can't make it in agriculture.

Convergence is expected to have the largest impact in southern-hemisphere countries because they enjoy higher crop yields and have lower land and labor costs. It is already occurring, for example, in Southeast Asia for palm oil, but also in the conversion of forests to food production. Given land scarcity, we expect greater land-use conflicts in these areas.

The rural poor with no property rights will be most threatened by this trend. Increases in land prices could be good news or bad news for the poor, depending on whether they get property rights.

Payments for carbon sequestration

by Alain Karsenty
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The question of who owns, or who *will* own, carbon is getting increasing attention. There are four possible architectures for REDD:

1. a market-based and centralized system, which would credit countries for national results against a baseline;
2. a centralized international fund that would be used to reward countries (the Brazilian proposal);
3. a market-based and decentralized system, under which certified projects and, secondarily, countries, would get direct carbon credits (a nested approach); and
4. an international fund for financing (sectoral and extra-sectoral) policies and measures, and country-wide payment-for-environmental-services (PES) schemes. This fund would invest in changes in agriculture and land tenure and provide land-use incentives for farmers.

The first three of these possibilities are about rewarding reductions in deforestation and the fourth is about financing changes in policies and economic structures.

Whatever the architecture that is ultimately decided, PES can be applied. In reality, however, PES is not about selling environmental services but is, in most cases, a compensation for the freezing of some local use rights (e.g. the customary right to clear land). The compensation is supposed to be set at the opportunity cost, although this is an unrealistic supposition. Such use rights are associated with land/resources tenure rights, which need to be mapped, registered and recognized if they are to lead to compensation. We are talking about a major evolution but not a revolution. If such a process is to work, however, many African countries will need to modify their concept of the 'state domain' to take into account tenure rights.

PES presents a dilemma because it implies payments for complying with the law, something that, in its barest form, would mean the end of the rule of law. It's a very complicated problem. One possibility would be to identify those areas or territories where *administrative regulation* (command and control) will be used and those where *incentives* (i.e. economic instruments such as PES) might be favored. PES could be used as an instrument to encourage farmers to keep forest on land they are legally entitled to clear. Many African countries, however, consider that all land is state land and such legal entitlement might not be recognized.

PES is a useful tool, but paying farmers to stop clearing forests without providing them with long-term revenue alternatives and new economic models is unsustainable. Looming problems include:

- an escalation of opportunity costs with growing land needs;
- high transaction costs to control moral hazard;
- a growing numbers of PES candidates; and
- an infinite time-horizon for payments.

Land tenure and carbon sequestration in Africa

by Arthur Green
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In debate over the links between forest tenure and reduced emissions from deforestation and forest degradation (REDD), there are a few points of agreement:

- clarifying the rights and responsibilities of local resource tenure regimes is essential for establishing PES;
- while there are good arguments for establishing a uniform national legal code for land, however, there are fundamental difficulties (sometimes incompatibilities) in transitioning informal, local tenure regimes to national, statutory law; and
- until recently, REDD has focused on the state, has been top-down, and has not confronted situations where the state is weak, corrupt or illegitimate.

Carbon trade: The extent to which Africa's poor might benefit from carbon sequestration projects remains unclear *Photo: P. Pa'ah*

There are also a number of contentious issues and questions. For example:

- informal land tenure in Africa could serve as a prohibitive obstacle to carbon sequestration projects and REDD;
- land-tenure regimes will not transition fast enough to function within the timeframe specified for REDD (2012) or to have a viable impact on the critical period of large-scale carbon sequestration (next decades); and
- if land tenure is a prohibitive obstacle (at least in the short term), what other options do we have for facilitating REDD and carbon sequestration?

There are also several tenurial constraints to REDD in Africa. For example, the legal pluralism of land-tenure systems is complex. Tree tenure—the ownership rights associated with trees—is also difficult.

Are there ways around such complexities? For example, perhaps states could recognize informal tenure zones (community forestry) and funders and communities could implement projects that rely primarily on voluntary payments and secondarily on carbon markets. Another option could be to treat carbon rights separately to land rights. This might involve the re-evaluation of temporary certified emission reductions, crediting periods and non-permanence so that the legal framework can commoditize flexible local management that captures carbon or avoids degradation. This system could function without clear tenure, recognizing and commoditizing higher-risk scenarios for avoided degradation/deforestation or temporary carbon sequestration projects.

Adaptation: what matters—forest access or ownership?

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In West Africa, existing forest policies do not take into account climate change. Forest management can improve the adaptive capacity of forests but, if done poorly, can also leave them more degraded and less able to respond to change. Forest management practices can help forest to adapt to climate change, but policy instruments are also needed to ensure that management can adapt as conditions change.

Access to the forest is an essential element for community adaptation to climate change. Households already use the forest as part of their adaptation strategies. Fodder for livestock can be very scarce during drought, for example: in such times, the forest provides resources to keep the herd alive. When villages are hit by strong winds they turn to the forest for construction materials.

Although both are important, neither forest access nor forest ownership is a silver-bullet solution for increasing the adaptation of socio-ecological systems. Finding the right incentives for forest policy and governance reforms for promoting adaptation requires flexibility rather than a focus on only one type of reform. Ensuring resource access is important in the short and medium terms; securing ownership to the resource could help ensure the sustainability of adaptation strategies over the longer term.

Women's role: In the discussion on climate change, conference facilitator Prudence Galega called on the women present to organize themselves (see statement on page 28) *Photo: A. Sarre*

Question from the floor: With the current land-tenure system in Africa, is it likely that Indigenous people in Africa will receive any benefits from REDD?

Karsenty's response: it is true that there is a risk that communities will not get much out of REDD because the simplest way to get credits from REDD will be to do conservation projects: from a narrow carbon perspective, they bring more carbon credits than community-based activities. In any case, the fight against deforestation cannot be limited to payments; it is also necessary to solve the underlying problems.

Chair's response: payments must be made—we are all agreed on that. Some of us in tropical countries want to go beyond payments for reduced deforestation and forest degradation to payments for good forest management. Natural forests are not very competitive as a land use if they only produce timber but they are very good at protecting biodiversity. Generating additional funds for good forest management through REDD would be a way of compensating landowners for the opportunity they forgo in not clearing their forests for agriculture. There is evidence that good forest management will reduce emissions. The question here is how to make these payments, and to whom? I don't think we should be discussing if payments have to be made—they must be. Another question is, who should pay? The answer to that is clear: the rich—worldwide—have to pay. We cannot ask the poor to pay, and most of the people living in and around the forests are poor. The rich people have to pay, and the payments should accrue mostly to local people.

Question from the floor: The REDD mechanism talks about emissions from deforestation and forest degradation. In Nepal, 15 000 community forests have already reduced deforestation and we have a large carbon stock in our forests. What will be the benefit to them of the REDD mechanism? Will all communities benefit from this, particularly those already conserving their forests?

Green's response: In climate-change negotiations three things keep coming up: additionality, leakage and permanence. Should we count your forests, which are already there and well-managed? People are arguing about that.

Question from the floor: What is the role of women in the whole process of climate-change mitigation and adaptation? Why worry about women? Because we are at the center of poverty, at the center of all the problems faced by society because we take care of everybody else. If you trust women's groups you will start to see effective results in the field because women are not here to mess about with your money.

Chair's response: I think we all know the value of women in forests. We have talked about land conflict; if we gave a greater role to women we would have much less violence. There are many ways to improve the status of women, but education is a starting point.

Facilitator's response: It is becoming evident that we are forgetting an important actor group; I challenge the women at this conference to organize themselves.

Green's response: I'm not an expert in women's rights, but I would love to see women making proposals for projects through the Clean Development Mechanism or REDD or any other sort of environmental payments. That would be worthwhile as an experiment in women's rights.