

AGRICULTURE AND CLIMATE CHANGE: AN AGENDA FOR NEGOTIATION IN COPENHAGEN

The Importance of Property Rights in Climate Change Mitigation

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Even with abundant evidence of the urgent need for action on climate change mitigation, there are still those who consider mitigation strategies a burden. In the agricultural sector, climate change mitigation calls for changing some agricultural and resource management practices and technologies and often requires additional investment. However, there is an opportunity in agriculture for net benefit streams from a variety of zero- or low-cost mitigation opportunities ranging from agroforestry practices and restoration of degraded soils to zero-till and other land-management practices. Momentum has been generated to incorporate agriculture into carbon markets, potentially allowing smallholder farmers to access benefit streams from such transactions. However, who will receive the benefits from mitigation funds by, for example, increasing carbon stocks or reducing greenhouse gas (GHG) emissions from land, will depend on the way different types of property rights are defined and dealt with in the upcoming climate change negotiations in Copenhagen.

In many areas of the world, land tenure arrangements are complex. For example, in Africa, more than 90 percent of the land is formally claimed as state land, although millions of farming and pastoralist households use various customary and informal arrangements to access the land and other resources. Millions of hectares of forest and pastoral land in Asia and Latin America are similarly listed as state land, although used by communities, especially those of indigenous people or other marginalized ethnic groups. Often the same area may be under co-existing informal tenure systems, most of which are not recognized by formal land laws, but are instead accepted and enforced by the communities. Even where property rights are vested in a formal legal system with strong enforcement procedures, climate change mitigation measures raise new issues of who owns incremental carbon stocks and who should receive compensation for reductions in GHG emissions.

Property rights are complex

The concept of property rights goes beyond formal land ownership. Land users can have any one or a combination of a "bundle" of rights to the land, including access, withdrawal, management, exclusion, and alienation. Rights to land may be separate from rights to trees or other resources. Rights may belong to individuals, groups, or whole communities. They may also come from various sources, ranging from statutory and customary laws and religious practices to international treaties. Limiting carbon sequestration payments to those with formal land titles and individual rights disregards other important sources of claims.

Implication of property rights for mitigation activities

Access to land or other resources may not be enough for smallholders in developing countries to participate in and benefit from climate change mitigation strategies. Tenure security for smallholders is important if they are to take full advantage of schemes such as carbon sequestration payments. It will enhance the welfare impacts

of carbon sequestration projects as well as protect the poor and vulnerable from the loss of livelihood sources.

Current funding mechanisms for GHG mitigation through afforestation and agriculture focus only on formal land owners and do not recognize or take into account the complexity of existing tenure arrangements, especially those of millions of people in developing countries. For example, in situations where smallholders do not have a *de jure* right to the land that they use for crop cultivation or livestock rearing, they may not be able to participate in and benefit from afforestation projects outlined under the Clean Development Mechanism (CDM) framework. There are, however, ways in which people without formal tenure rights can be included in mitigation schemes and compensated for the mitigation services they provide. For example, Costa Rican law allows the use of public and private funds to pay landowners without a formal title, promoting several successful payments for environmental service programs such as FONAFIFO (Fondo Nacional de Financiamiento Forestal). Also, in some parts of India, groups of women are compensated for planting trees on local common property. Approaches that similarly recognize and reward those who undertake mitigation activities on customary or common property should be considered for incorporation in future international agreements.

Most low-income households in developing countries live in areas with GHG mitigation potential. Research in natural resource management has found that smallholders will invest in new agricultural technologies (for example, conservation tillage) or practices with long-term benefits (for example, tree planting) only if they have secure rights to the resources. In fact, institutions for secure rights are a precondition for a well-functioning system of payments for environmental services such as carbon sequestration, and they are crucial for the long-term effectiveness of mitigation strategies. If environmental benefits from such transactions are expected in the future, secure property rights are even more important as an incentive for long-term investment in conservation practices, which are essential for both mitigation and adaptation. In some cases, providing *de jure* recognition of customary property rights can both strengthen tenure security and provide incentives for participation in carbon sequestration programs.

Security of tenure and access is needed not just for individuals, but also for communities. In cases where communities hold joint property rights (formal or informal) or, at least, share use and management rights to land, they can act as collective providers of carbon sequestration. Even if a group does not have a formal title to land, as is the case in some pastoralist communities, they can be a valuable supplier of carbon sequestration by, for example, adopting silvopastoral practices that include planting trees and shrubs on pastures to use for fodder and fencing. But many of the current systems risk not only bypassing those without *de jure* land titles; by increasing the value of land, payment systems may even create pressure to alienate such land from those who have been using it under customary or common property rights, thereby leading to the takeover of the land by either the state or large-scale private interest groups. Issues with recent efforts to expand biofuel production in developing countries

illustrate the potential problems of paying for carbon sequestration. Large tracts of land allocated by African governments for commercial biofuel cultivation were common property or under customary tenure, but such land is often reallocated without attention to prior usage, which typically results in lost access to resources for long-term land users. For example, in the Bualeba Reserve in Uganda, plans for commercial plantations to generate carbon offset payments under a project threaten to evict local people without formal titles who use the land for farming, grazing, and fishing. In South Africa, the government of Eastern Cape plans to fence off for biofuel production 500,000 hectares of communal land in the Transkei region, which is currently being used for communal grazing and vegetable gardens.

However, there are also examples of how those without a formal land title can be a part of the expanding biofuel markets. The Kavango Biofuel Project in Namibia is a collaboration between local farmers and a Namibian company to grow *jatropha* on communal lands. In return for replacing their maize and millet cultivation with *jatropha*, farmers receive capital costs, food, and cash. Those community members without access to land can participate in other jobs made available through the project.

Suggested negotiating outcome: Include resource users with traditional rights in mitigation funding programs

As mitigation markets grow, there is a danger that poor people with insecure property rights will be excluded. Therefore, mitigation policies should include mechanisms to engage those with legally insecure tenure and to ensure that their rights and livelihoods are not threatened.

Agriculture-based mitigation responses should be designed to include not just the *de jure* owners, but also the users and managers of natural resources with customary rights. Payment recipients should include the users of land who make the investment in mitigation. It is important to consider not only those with individual rights, but those with communal rights as well. The example of the Kavango Biofuel Project illustrates how well-designed mitigation programs can have positive welfare effects for all resource users, regardless of ownership status.

Suggested negotiating outcome: Use mitigation programs to improve tenure security

Millions of hectares of forests, drylands, and other agricultural lands could provide important environmental services for mitigation, but they are held under insecure tenure. In such cases, providing tenure security could be used as an incentive or a reward for participation, either in addition to or instead of monetary compensation. For example, in Indonesia new social forestry agreements increase security of tenure for poor upland farmers in exchange for their commitment to land-management methods that would incorporate agroforestry and land- and water-conservation practices. Such arrangements to secure property rights as part of mitigation programs should be formulated as an early part of the program. Providing stronger land rights as part of the program instead of requiring all participants to have formal

title would allow many smallholders to participate and provide incentives that contribute to long-term effectiveness of the programs.

Suggested negotiating outcome: Include pro-poor governance safeguards in mitigation funding mechanisms

Since land is increasingly seen as a target for mitigation strategies, land values are increasing, which presents additional challenges to smallholders without secure tenure. If mitigation programs are poorly structured, then poor smallholders could see their resource rights undermined. Robust safeguards are necessary to protect the poor in the face of growing demands for their land. To ensure that the poor are aware of and educated about their rights to resources, these safeguards must include clear procedures and standards for local consultation, mechanisms for appeals and arbitration, and procedures for informed consent. For example, in Mozambique, the government introduced legislation that requires investors to consult with local communities holding rights to land before undertaking any major commercial enterprise, such as biofuel production.

Regardless of ownership status, payments for carbon sequestration inherently involve a change in property rights over land. By entering those arrangements, the landholder gives up certain management rights, and the payer acquires a partial interest in the land. Therefore, all service providers should have an adequate say in shaping these arrangements. The review of mitigation financing schemes should involve a critical assessment of who holds not only the statutory and customary use rights to resources, but also the decisionmaking rights over those resources. To facilitate such assessment, land information should be improved by updating inventories of land occupation and carefully mapping the bundle of rights that users have. This will contribute to both the effectiveness of carbon sequestration payment programs and the welfare of poor people who manage lands that contribute to climate change mitigation. ■

For Further Reading: IIED and NRI, *Climate Change, Bioenergy, and Land Tenure* (Rome: Food and Agriculture Organization of the United Nations, 2008); B. Swallow and R. Meinzen-Dick, "Payment for Environmental Services: Interactions with Property Rights and Collective Action," in V. Beckmann and M. Padmanabhan, eds., *Institutions and Sustainability* (Dordrecht, The Netherlands: Springer, 2009); S. Pagiola, A. Arcenas, and G. Platais, "Can Payments for Environmental Services Reduce Poverty? An Exploration of the Issues and Evidence to Date from Latin America," *World Development* 33, no. 2 (2005): 237-253; FAO, "Information Sheet on Climate Change and Biofuels," for the High-Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy (Rome: Food and Agriculture Organization of the United Nations, 2008); R. Meinzen-Dick, P. Kimeri-Mbote, and H. Markelova, *Property Rights for Poverty Reduction, 2020 Focus Brief on the World's Poor and Hungry People* (Washington, D.C.: International Food Policy Research Institute, 2007).

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