

> MAJOR FOOD COMPANIES, PES AND COMBATING DEFORESTATION

Using PES to achieve "zero deforestation" agriculture

Alain KARSENTY

Strategies to tackle deforestation are evolving. Under pressure from environmental NGOs and consumers, the major food companies are voluntarily committing to apply the "zero deforestation" principle, especially for their production of the key agricultural commodities (palm oil, cocoa, soy, etc.), which are responsible for around 70% of deforestation throughout the world. This concept is nevertheless ambiguous and difficult to implement.

Payments for environmental services (PES) can help to achieve these ambitions. PES geared towards individual investment would be proposed to producers to enable them to modify their practices; these would be financed by zero deforestation companies. In addition, collective PES for forest conservation at the local level would be proposed to communities; these would be partly financed by a broad-based, low-level fee.

Deforestation is an important element of global environmental agendas: climate, biodiversity, and combating desertification. With gross forest cover loss in tropical countries reaching almost 10 million hectares per year (Global Forest Watch, 2015), deforestation rates remain very high. Although land-use change now accounts for only around 10% of annual anthropogenic greenhouse gas emissions, this is because fossil fuel emissions continue to grow, whereas the global deforestation rate has changed little over the past decade at the global level.

More than 80% of deforested land is used for agricultural purposes. Industrial agriculture is responsible for two thirds of deforestation in Latin America and for one third in Africa. In addition to their direct responsibility, firms are also involved in deforestation caused by small producers. They are supporting the diversification of production systems towards perennial crops (oil palms, cocoa) through contracts with or monitoring of producers via the cooperatives that supply them.

perspective

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> Companies' zero deforestation commitments are becoming a new tool for mobilisation

Voluntary commitments by firms...

For several years and especially since 2010, the major transnational food companies, especially for palm oil, which are criticised by environmental organisations, have been encouraged to cut out of their supply chains any products derived from deforestation. They played a key role in the New York Declaration on Forests during the UN Climate Summit 2014. Groups of companies – the Consumer Goods Forum (soy) and the Tropical Forest Alliance (palm oil) – took part in its organisation. Several companies, alongside heads of state and government, pledged to halve the loss of the world's natural forests by 2020 and to halt deforestation by 2030. Moreover, some 20 companies committed to sourcing deforestation-free palm oil, such as the Indonesian Wilmar, one of the leading global producers. Finally, some states – Indonesia, Côte d'Ivoire – pledged to support companies' efforts to eliminate from their supply chains agricultural products derived from deforestation.

Companies' zero deforestation commitments are becoming a new tool for mobilisation, whereas the hopes raised by REDD+ (Reducing Emissions from Deforestation and Forest Degradation in developing countries) are now fading.

> Without support for small producers to enable them to meet zero deforestation targets, outcomes will be disappointing

... that are difficult to implement

However, these voluntary commitments are difficult to implement and to verify, especially when supply chains are comprised of a large number of small producers.

First of all, the concept of zero deforestation remains ambiguous. It implies agreement on the definition of a forest, especially on the minimum forest cover threshold per unit area and on canopy height. Deforestation itself has several definitions. For FAO, a logged area is not counted as deforestation unless it has been converted to another land use, while for Global Forest Watch, this would be considered to be deforestation. A distinction also needs to be made between gross and net zero deforestation: net calculations allow for offsetting deforestation in one area with reforestation in another, even if the nature of the forests cleared and those planted is different, especially in terms of biodiversity. The companies that have adopted zero deforestation remain vague about these aspects.

> Acting in supply chains, with firms and producers, but also in territories, with communities

Next, how can consumers be sure the products they buy are zero deforestation if these products cannot be accurately traced from the original plot because there is no reliable cadastre? The clarification of land rights and the implementation of a georeferenced land information system in rural areas are therefore prerequisites.

Moreover, the zero deforestation targets imposed by companies are often too restrictive for small producers. This is reflected in the steps taken by producer organisations in Indonesia and Malaysia: they have asked palm oil companies to abandon their commitments and to adopt less binding objectives, on the grounds that small producers are unable to meet these requirements. Without additional long-term support for small producers to enable them to meet the demands of these firms, the zero deforestation commitment will be compromised.

Finally, it would be a mistake to think that even if firms are in a position to guarantee the effectiveness of their commitments, they can succeed in reversing current deforestation and degradation dynamics. Indeed, any given territory faces numerous factors of deforestation and, more generally, of environmental degradation, and managing one factor may lead to the development of another. Controlling production conditions for farmers in one sector does not mean that all drivers of degradation are controlled – other agricultural or pastoral production systems, charcoal production, and timber harvesting. In other words, a zero deforestation approach in one or more organised sectors could be accompanied by continued environmental degradation in a given territory. It is therefore necessary to act not only in supply chains, with firms and producers, but also in territories, with the communities living there.

PES as public policy tools

How can these obstacles be overcome? Payments for environmental services (PES) can provide an instrument for decoupling agricultural development and deforestation, in the sense that they provide a direct incentive to change practices or to engage in conservation.

PES are written contracts, whether individual or collective, that are voluntary and conditional (payments are provided as long as commitments detailed in the contracts are sustained). Most PES reward people for a certain type of land use, in other words an environmental service provided by users, a use or service associated with the

> Combing asset-building PES and direct incentives for conservation

quantity and quality of an ecological service provided by nature. The distinction between land use-restricting PES and asset-building PES is well established. Individual PES reward people for a certain type of land use, in other words an environmental service provided. Collective PES reward communities for preserving the ecosystems in their territory in the long term.

Combining these two types of PES would make it possible to overcome the obstacles described: asset-building PES would support small producers in the adoption of agro-ecological practices; and collective PES would finance communities to preserve ecosystems in their territory.

As mentioned above, firms will only be able to fulfil their commitments if small producers implement ecologically intensive agrosilvopastoral systems, which will also enable them to increase their income and to avoid encroaching on the natural ecosystems still available. This would require financial support to promote innovation and to encourage land users to plant trees and hedges or to restore degraded areas. Payments could be based on the labour costs invested (agricultural minimum wage, for example), although variable payments according to the species planted or the areas in which these operations are conducted could be possible.

These asset-building PES will guide developments in agrosilvopastoral practices and will help to increase the resilience of agricultural systems in a context of changing climate and environmental conditions by contributing to the diversification of crops and activities and supporting the reintroduction of trees into monocultures (for example, establishing agroforestry systems in order to also produce shade cocoa).

In addition, collective PES will be implemented at the local level to restrict certain land use rights: in exchange for regular payments, users will suspend some of their rights, whether real or deemed legitimate locally. A collective dynamic will thus be created supporting commitments for a given use of the territory, for the construction of a sustainable territory or for zero deforestation, depending on the case. In order to plan or locate new perennial plantations, participatory zoning of territories could be developed. This could be based on two indicators: High Conservation Value (HCV), which distinguishes between forests according to criteria such as biodiversity or their socio-cultural role; and High Carbon Stock (HCS), which differentiates between forests which even when disturbed still provide ecosystem services, and highly

degraded forests, which can be converted to agricultural plantations.

Indicators of the environmental quality of the territory will also be discussed with populations. PES could help to finance environmental quality improvements that depend on collective action – for example delimiting village lands by means of collective tree planting – and to provide collective advantages (land security through the demarcation or registration of individual plots, drinking water supply, storage facilities, rural roads, schools, dispensaries, etc.) by making them conditional on the maintenance or improvement of environmental quality, which is measured and acknowledged together with the community.

Combining individual asset-building PES and collective land use-restricting PES would create compulsory solidarity (that would also be necessary to achieve efficiency) to guarantee conservation. Establishing the conditional, tied nature of payments (if the collective conservation contract is terminated, individual contracts will suffer the same fate) would help to limit the risks of free riding through the exertion of social pressure.

Implementing a system of this kind requires substantial public involvement, for example to identify and map the individual plots on which farmers will fulfil their contractual obligations. The approach adopted could be that of the rural land use plans (georeferenced cadastral information, with the identification of plots and right holders, and an indication of the exact nature of individual and collective rights).

Financing through innovation

How can a mechanism of this kind be financed?

For their zero deforestation commitments to become effective, companies must support the family farmers under contract to enable them to comply with the specifications established, which requires contributions to financing their training and basic investments (nurseries, etc.).

However, substantial public investment is also required. Although international finance in the name of climate mitigation or development assistance can be mobilised, a national financing base would shield this programme from the vagaries of international funding.

To ensure sufficient, long-term financial resources, it is possible to use a fee mechanism with a very broad base and low rate, with fees earmarked for the PES programme. This would not be environmental taxation (the principle of

> Associer les financements internationaux publics et privés avec un socle de financement national.

A few words about...

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• which is to tax pollution in order to reduce it),
• but a yield-oriented tax whose proceeds are
• allocated to financing a public good: environ-
• mental quality improvement in rural territories
• (through the reintroduction of trees into crop-
• ping systems). A broad base means that fees must
• be applied to as many supports as possible, pro-
• vided this is socially and therefore politically
• feasible. This is the condition on which the fee
• levels can be low enough to be relatively insen-
• sitive for consumers. Indeed, contrary to an eco-
• tax, the goal of this type of fee is not to reduce
• consumption of its support (or to increase it), as
• this would reduce its yield and jeopardise the
• financing of the PES programme. Several sup-
• ports are possible: telephone units (a slight
• increase in the cost of call seconds); bottled
• drinks (beer, other alcohol, soda, mineral water,
• etc.); sporting bets, lotteries (levies on bets and
• tickets); car tax (increase allotted to the PES
• programme); water distributed by public
• networks (likewise); and fuel distributed in ser-
• vice stations (likewise). Companies and distri-
• butors would simply collect fees, which would
• be set by the government and applied in a gen-
• eral, uniform manner. The burden of the fee would
• fall on final consumers, as with VAT, to ensure

its introduction does not distort competition between companies in the different markets.

A system of this kind could soon be implemented in Côte d'Ivoire. This country is basing its REDD+ strategy on decoupling agricultural development and deforestation. The first stage will involve setting up pilot PES systems in certain companies' supply areas, in order to form partnerships with the private sector and to test different aspects of PES mechanisms. These pilot projects will serve to analyse different components and methods, and lessons will be drawn from them before proposing a national programme. This change of scale requires the emergence of a reference national operator with staff trained in the pilot mechanisms. Companies will need to confirm their zero deforestation commitments and to contribute to financing asset-building PES. The government will also need to fulfil its environmental commitments by introducing fees allotted to the national PES programme. This would increase the credibility of policies aimed at promoting a green economy, credibility which should be the basis of substantial financial support backed by development partners and specialised institutions such as the Green Climate Fund. ◀

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<http://www.tandfonline.com/doi/full/10.1080/10549811.2015.1031909>

Butler R. A., Laurance W. F., 2008. New strategies for conserving tropical forests. *Trends in Ecology and Evolution* 23 (9): 469-472.

<https://repository.si.edu/handle/10088/11800>

Lavigne Delville Ph., 2010. « Conceptions des droits fonciers, récits de politiques publiques et controverses. Les Plans fonciers ruraux en Afrique de l'Ouest ». In: Colin J.-Ph., P.-Y. Le Meur, E. Léonard (eds.), *Les politiques d'enregistrement des droits fonciers. Du cadre légal aux pratiques locales*. Karthala, p. 69-103.