



1.2 Deforestation-free claims: scams or substance?

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Introduction

Zero deforestation, deforestation free, carbon neutral, climate smart — there is no shortage of terms used as market branding to appeal to consumers who want to take personal responsibility for their share of global deforestation and greenhouse gas emissions. Do such words have any meaning? How can such things be measured? Is there indeed increased accountability with all these claims? Will smallholder producers be excluded from value chains as their produce is undocumented? Will the global climate problem become more manageable if more consumers buy from such value chains?

To answer these questions, it is necessary to understand the bigger picture: the emissions that cause global climate change; the way countries have so far agreed to account for emissions; and the degree to which agreements are matched by accountability. Current UNFCCC accounting systems are essentially supply-side, while emissions are counted on the production side, based on country land area and production systems. An alternative would be demand-side accounting, starting from the human population and its per capita emissions that determine demand and with the footprints or emissions attributable to a product or service based on a life-cycle analysis.

Supply-side accounting is reflected in labels for deforestation-free products as producers attempt to satisfy end consumers' demand. However, isolating one production chain from other land

uses at the landscape level is not an accurate reflection of reality due to the linkages of drivers and actors. For example, areas converted to coffee in central Vietnam are defined as "degraded forest" or "scrub," but such land classes continue to be produced by other actors and land uses in the same landscape. Rausch and Gibbs (2016) also pointed at such loopholes in current zero deforestation claims with Brazilian soybean.



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This article explores these issues through seven questions:

- When, how and why do zero deforestation claims arise in global trade?
- How do forest definitions relate to zero deforestation claims?
- How much variation is there in the footprints of equivalent products?
- Is a chain-of-custody system needed for credible deforestation-free value chains?
- How would actors along a value chain need to interact with jurisdictions to control leakage?
- Can individually determined contributions support nationally determined contributions?
- What wider change in the global economy is needed to make zero deforestation claims relevant?

Shifting blame or solving problems?

A comparative analysis of environmental and social certification systems in five tropical commodities (timber, palm oil, coffee, cacao and rubber; see Mithöfer et al. 2017) used the issue-attention cycle as the starting point for understanding what issues are relevant for key commodity that gained sufficient prominence in public discourse to spark a certification response. Whether or not such responses only shift blame to non-certified production, or also contribute to reducing the severity of deforestation, is an open question. Certification is focused on the exclusion of the non-certified, while landscape approaches include all current actors and activities as a starting point. Case studies showed timeline differences and spill-over learning curves where certification is an intermediate stage, and the “internalization of externalities” requires behavioural norms along value chains rather than “payments for not committing crimes.”



Definitions

The definition of “forest” is the devil in the details of deforestation-free claims. In most forest definitions, agriculture and forest are mutually exclusive categories, with generic non-agriculture conditions added to tree-cover criteria for what comprises forest. And since clear-felling/replanting is considered a normal

forest management practice, land can occasionally be bare. There is also ongoing debate on how to distinguish natural from planted forest, and although both have been reported jointly in FAO forest resource assessments, their properties differ substantially. The forest implied in deforestation-free commitments is natural forest and often with high conservation value or high carbon stock value. So, deforestation by FAO reporting standards can continue even if all the commodities produced meet the deforestation-free standards currently proposed; species-rich agroforests have already become a target for conversion to monoculture plantations (Villamor et al. 2014). The scale of assessments also matters. For larger areas zero-net deforestation (no change in forest fraction of landscapes) differs from zero-deforestation (no single-pixel changes), and thus, given the ongoing debate on definitions, deforestation-free claims can be virtually meaningless (Box 1).

Box 1. Definitions

There is little reason to exclude oil palm from the generic concept of what is a tree, and as oil palm plantations easily meet the height and tree cover criteria in the definition of a forest, they can be classified as such. Conversion of natural forests to oil palm plantations is then per definition, “deforestation free,” as it “only” modifies the type within the forest category (van Noordwijk and Minang 2009; van Noordwijk et al. 2014). This contrast with common value systems— but it is the consequence of forest definitions made by foresters who defend monocultural plantations as efficient makeovers of natural forests. In practice, a “forest” is as much an institutional concept as it is a description of a woody vegetation. Zero deforestation claims can now be restricted to high conservation value (HCV) or high carbon stock (HCS) forest subsets, leaving the rest open to conversion (Meyer and Miller 2015). Claims to be “carbon neutral” refer to quantitative perspectives on land-use change and have more substance (van Noordwijk et al. 2016) — but they may not have the same appeal as “deforestation free.”

Footprints

Policies regarding footprints (including EU rules on biofuel use) tend to use characteristics for product categories as a whole to allow comparison with others. The variation in footprints within any biofuel feedstock, however, is substantial. Palm oil was, depending on land history and management, both the best and the worst among biofuels compared by Davis et al. (2013). Variation in footprints within a commodity (or commodity group) is essential for differentiation, if standards and certification procedures are to be meaningful (Mithöfer et al. 2017). As forests were the common pre-human vegetation in large parts of the world, and especially where tropical commodities are produced, zero deforestation claims must specify a cut-off time. History cannot be turned back and historical land cover change must be accepted, usually referring to a “grandfather” rule linked to the time an agreement was reached. But as there tends to be a continuous reinvention of standards, the reference point of what is considered historical keeps moving forward. The cut-off date of past forest conversion is a key detail in any standard.

Chains of custody

Where the quality that a certification system tries to protect is embedded in the product itself but is not easily observed, a chain of custody system is essential. Such a system requires considerable documentation and bureaucratization to track a product along all transport and transformations in its value chain. This tends to be easier in vertically integrated value chains than in those that involve multiple market transactions. Interestingly, the chain of custody concept could also apply to land. As it stands, land (or associated concessions) can be readily transferred between commodity sectors without responsibility for past (buyer) or future (seller) ecological changes. Concessions for sustainable logging can transfer logged-over forests (that can still recover ecologically) to plantation

companies that start with land outside the high carbon stock category. Government authorities that provide concessions could accept responsibility for area-based chains of custody, and in so doing clarifying the intermediate landscape scale in jurisdictional dimensions (Minang et al. 2015).

Controlling leakage

In addressing consumer behaviour, self-regulation by the oil palm industry has led to a segregation of the market, as seen in the Tripa swamp in Aceh, Sumatra (Tata et al. 2014). Companies that want to meet external expectations selectively retain defensible holdings and sell controversial ones, but companies that cater to markets that don't ask questions buy concessions from the first group. The companies are deforestation free, but the landscape become deforested. This is a form of leakage. 'Avoided deforestation' was rejected as a valid target for emission reductions in early UNFCCC negotiation because of such risk of leakage. It may be possible to reduce deforestation and associated emissions in selected places, but unless the total demand for products is reduced, such reductions are likely to lead to increased conversion elsewhere. Dewi et al. (2013) showed that

establishing protected areas in Laos, Indonesia, Madagascar and Cameroon was associated with increased forest conversion in surrounding zones. Increasing the size of projects and ensuring that all areas are included is essentially what made avoided deforestation acceptable within the UNFCCC when this practice increased to the national scale. After initial resistance, sub-national scales of implementation described as jurisdictional approaches can more credibly declare that they are deforestation-free than private-sector actors can. Synergy between the private sector and local governments is now sought as a better approach to a "green economy" or to low-emission development strategies. The proposal by Meyer and Miller (2015) to combine zero deforestation zones with jurisdictional REDD+ is a logical next step — but it is based on expectations of REDD+ finance that may not materialize. An internationally agreed carbon tax is an alternative, but seems far from current political realities. Without external investment in deforestation-free areas, however, it will be hard for governments to meet the Sustainable Development Goals. Current commitments by

the Indonesian government to avoid further peatland fires are inspired by health and economic consequences, rather than by carbon emissions (Dewi et al. 2015).



Individually determined contributions

The demand for products that meet standards beyond compliance to legal norms is an expression of individually determined contributions of global citizens whose sense of responsibility does not stop at national borders. This context could be particularly effective when targeting emissions not currently accounted for, such as those embodied in trade. Lifestyle choices, dietary changes and waste reduction may be more effective than choosing products with a smaller carbon footprint. Governments that impose restrictions on individual consumption have little chance of winning elections, so a strong foundation

in voluntary choice and moral peer-group pressure will be more effective than nationally determined commitments.

Wider challenges

One of the greatest global accounting conundrums is the low appreciation of agriculture and forestry. They account for only 5.5% of the world's GDP while employing more than half of the world's population, using two-thirds of all land and three-quarters of all fresh water, and providing more than 90% of humanity's food needs. Something is surely amiss in the world's balance sheet, and zero deforestation claims alone will not fix this problem. Providing raw materials for extractive industries and primary commodity production, will not bring economic development where it is most needed. A stronger commitment to developing local industries that add value to commodities is needed to make "green economy" expectations become reality. This can be achieved even without the expansion of agriculture and plantations if productivity is increased, market chains are improved and downstream industries offer more off-farm employment opportunities.

Conclusions

Six key conclusions emerge. The first is that forms of certification that support consumer choices on the footprints they take responsibility for by buying certain products will themselves need public scrutiny, as there appears to be a fuzzy concept of "forest." Second: the accepted cut-off date for historical forest conversion is an essential detail for any forest-protecting claims. Third: as much deforestation is a stepwise process, often initiated by logging, that in itself is not ecologically irreversible, and the chain of custody concept should be extended to apply to areas, not just products. Fourth: rather than certifying products as deforestation-free, it is more meaningful to certify large landscapes or sub-national jurisdictions as sources of verifiably sustainable or responsible products, if these can be shown to have above-average performance maintaining natural forests in relation to human population density. Fifth: individually determined contributions to global environmental integrity can help in global forest protection, especially where they complement (rather than overlap with) national commitments and regulations. Finally, the extraction of primary agricultural products that add little local value or on-site processing will continue to be a risk for remaining forests. Concerted local strategies, formulated as green growth plans that integrate land-use plans, good agricultural practices and improved value chains, can promote a landscape approach through public-private-people partnerships that achieve equitable economic growth while conserving forests and maintaining healthy ecosystems.

It may be too early to state what part of current zero deforestation claims are substantiated by changes on the ground in production areas, and what part is merely shifting blame, with no net beneficial effect despite hard work at lower scales, such as Rausch and Gibbs (2016) pointed out with loopholes in current claims against Brazilian soybean.



Ultimately, positive impacts may arise from a complementary relationship between individually and nationally determined contributions. Zero deforestation intentions are laudable, but attention to detail is needed to make them real.

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