



Document de travail de la série

Etudes et Documents

E 2009.02

**A response to the commentary on
“Compensated Successful Efforts”**

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This version: January 28, 2009
Forthcoming: Ecological Economics
8 p.

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We welcome the commentary by Luca Tacconi on 'Compensated Successful Efforts'. His remarks highlight important arguments that we are pleased to discuss. It also provides an opportunity to clarify the potential applications and policy implications of our proposal in response to the issues raised in the commentary.

The initial paper focused on the methodological aspects of a new proposal (Compensated Successful Efforts, CSE), which seeks to determine how financial resources can be best distributed to support activities against deforestation in the context of the emerging REDD mechanism. Indeed, a key question is: which countries should have access to and benefit from the money made available at the international level due to their voluntary actions to reduce emissions from deforestation?

In this response, we discuss the political and financing aspects of CSE in greater length. At the same time it should be made clear that we have never assumed that analyses published in academic journals must *directly* influence on-going negotiations. We therefore consider that criticism based on an alleged irrelevance of our proposal in the current political context is not particularly well founded. We will return to this important point below, but wish to stress here that researchers have a duty to work independently rather than adhere to the rapid developments that take place in the negotiation arena, as their arguments are applicable to a broad range of stakeholders, including researchers, NGOs, indigenous groups, international donors and many others.

Furthermore, prejudging the outcomes of the negotiations while the REDD mechanism has yet to be agreed upon or established, is precisely what we strive not to do. This is especially true for the REDD debate where comments have tended to be extrapolated or misinterpreted over time. This occurs because elements of ambiguity are inevitable in such a complex and sensitive debate, but also because deliberate distortion can serve the purposes of a variety of interests outside tropical forests and their direct beneficiaries. Let us give two brief examples. Firstly, "incentives" are usually presented as associated to a market mechanism, whereas they can in fact be distributed outside markets as well: incentives are not a specificity of markets but a characteristic of the deals with beneficiary (countries or agents) Secondly, the word "compensation" should only be used to refer to the distribution of financial resources

equivalent to the costs of reducing emissions. In the case of a market mechanism, where payments to countries are proportional to the future price of carbon credits and stocks of carbon per hectare, it would be more correct to use the word “reward”, as it infers that results are independent of costs.

The key arguments raised in Luca Tacconi’s commentary on CSE are addressed below:

The choice of structural variables and their exogenous characteristics

Surveys have been conducted to investigate and classify the causes of deforestation (e.g. Angelsen and Kaimowitz, 1999). One such classification that is often cited involves the identification of proximate and underlying factors, and others such as predisposing environmental factors and social triggers (e.g. Geist and Lambin, 2002). Our own classification is motivated by a different purpose: to isolate policy from structural factors. These structural issues are relatively easy to identify and model because there is a general consensus among experts over what these factors are, and also because they are quantifiable over time, which is in contrast to the numerous causes of deforestation associated with policies, governance and the functioning of markets for forest and agricultural products and services (e.g. the pricing of environmental services). This point is at the foundation of our efforts to draw a clear distinction between the “structural causes” of deforestation and those related to domestic policies and market failures. We acknowledge that our list of the structural causes of deforestation is not definitive and should be revised as understanding of deforestation drivers improves. However, a limited list of causes should be agreed upon by participant countries in order to make the methodology more straightforward, transparent and easier to apply.

From a technical point of view, the relevance of an econometric model depends on its accurate specification, i.e. the list of included exogenous variables. The method, i.e. panel estimation with time and country fixed effects, strongly improves confidence in econometric results with respect to a simple cross-country analysis: it allows controlling for country and temporal heterogeneity. The fixed country effects catch unobserved time invariant country heterogeneity due to differences in their geographical and environmental characteristics; the

time fixed effects catch unobserved period heterogeneity generated by international environment modifications.

We agree with the observation in the commentary stating that domestic policies have the capacity to modify structural causes of deforestation. However, this fact does not invalidate our approach, which is based on a distinction between domestic policies and structural causes. Indeed the capacity to modify structural factors exists only to the extent that economic and development objectives are sought by domestic policies (in contrast to forest conservation). Obviously, economic and demographic growth depends on domestic government initiatives. We however make the case that structural variables should be considered as strictly exogenous in our model, in the sense that reduced deforestation cannot be regarded as a trigger for their modification: governments will not refrain from boosting the economy for the sake of lower deforestation. Moreover, structural variables as used in our model are characterized by a strong inertia and are thus less prone to the influence of reduced deforestation policies.

The distinction between Annex 1 and developing countries

Tacconi's commentary raises an issue that is frequently on the agenda - that developing countries participating in a REDD mechanism (or other sectoral approaches) might find it unfair to be held accountable for their emission reduction activities, domestic redistribution of wealth and their active role in the reduction of deforestation (indeed Annex 1 countries that have engaged in a cap-and-trade system within the Kyoto Protocol do not have to report their domestic activities). But this statement apparently pays little attention to the fact that Annex 1 countries have to achieve emission targets with their own resources, while developing countries would benefit from external financial support, for instance in the form of tradable carbon credits. Developing countries are not therefore expected to bear the burden of their domestic emission reductions, as Annex 1 countries will pay and "compensate" their costs, as is clearly proposed with a REDD mechanism. In our opinion, a difference in treatment is thus strongly justified by the fact that the costs of emission reductions are born by industrialized countries.

Complexity of the CSE approach compared to the simplicity of output-based proposals

Tacconi argues that a CSE approach based on econometrics is far too complex at a time when negotiators seek the simplest tools to arrange the financial transfers to developing countries in exchange for reduced emissions. This argument is very important and deserves much consideration. We are fully aware that simplicity is a real quality in negotiations and to some extent a prerequisite to achieve a deal between Parties to the Convention. Nevertheless, for a mechanism that will have implications for many millions of people and will help determine the effectiveness of urgent measures against climate change, we should be careful not to rely overly on “simplistic” solutions and agreements. We believe that it is not excessively complicated to hold preliminary discussions with participant countries to agree on selected structural factors that are not under their control, and to decide on formulae for assessment under the partial authority of independent experts. Indeed, these steps are certainly not complex in comparison to the on-going negotiation process, the implementation of measurement methodologies according to IPCC standards, the negotiation of safeguards against undesirable means of reducing deforestation, or the creation and management of a market for forest carbon credits with all the associated insurance issues. In other words, there is no valid reason why “complexity” should be encouraged for some aspects (e.g. measurement of carbon stocks) but rejected for others (e.g. estimation of reference levels) as all of these issues will determine the success and fairness of the REDD mechanism.

In some instances simplicity is not a viable way forward, as the World Bank seems to have concluded with the Forest Carbon Partnership Facility (FCPF), a forerunner for REDD. Although the FCPF was established with the dual goal of helping developing countries to firstly prepare (readiness component), and then to purchase their carbon credits once deforestation has been reduced (carbon finance component), it has now expanded its activities to the direct financing of policies (Forest Investment Fund) and the assessment of national strategies.

Political influence

The author of the commentary points out that our approach would not be free of political influence over the distribution of financial resources to developing countries. We stated that the available proposals for a distribution of credits in proportion to measured results in terms of reduced emissions were subject to political influence because targets would be negotiated by each country, whereas our CSE approach would be more explicitly based on a transparent calculation derived from an agreed formula. Admittedly, there is still room for political influence at two levels: the design of the formula, and the decisions on the amounts of financial resources to transfer to each participant country, as these would not be strictly proportional to emissions reductions (but to activities implemented). We concede that these concerns are beyond the scope of our paper and were not therefore addressed. It is worth noting however that these concerns would be true for any program of development assistance under the authority of national or multilateral aid agencies. But a range of sound criteria can be used to direct these resources to the most appropriate countries, relating to the credibility of national strategies, governance, the emissions at stake or any other relevant factors. These concerns will be at the heart of our future papers that focus on the concrete application of the CSE, in the context of development assistance managed by a Fund (e.g. the Global Forest Carbon Mechanism proposed recently by the European Commission).

Fund/market and the availability of financial resources

We strongly disagree with the statement in the commentary that: *“there is increasing acceptance [...] that a market-based mechanism, or a hybrid one, should be adopted to successfully implement REDD, given the significant amount of financial resources required”*. This statement is certainly representative of the arguments commonly cited by the proponents of a market mechanism for REDD, but it does not rely on sound evidence. Instead this viewpoint stems more from a common belief and ideology, and also an acceptance that there exists insufficient political leadership to impose financial contributions onto Annex 1 countries in order to effectively fight tropical deforestation. Furthermore, it assumes implicitly that the private sector’s financial contributions via the carbon markets and the use of offsets would be disconnected from national budgets in Annex 1 countries. This is not correct. Such offsets would translate into less profit for sectors with emission commitments in

industrialized countries. Indeed the purchase of carbon credits to meet commitments would lead to a transfer of wealth to developing countries to compensate for fewer national emission allowances to be distributed to the sectors with commitments. This in turn would ultimately reduce national budgets in industrialized countries through, for instance, lower taxation of profits. The use of proceeds from emission allowances to finance the fight against deforestation, as proposed in Europe, would also have similar effects in principle on national budgets and the sectors with emission commitments. Markets are by no means a magic solution, and all depends on the political will in industrialized countries. In any case, a decision to base REDD on the markets would mean that these countries would have to give up part of their public financial resources.

An input-based approach and the negotiation context

The CSE proposal is undeniably (but not solely) an input-based approach, and as such differs from most of the current proposals for REDD. This has implications for the nature of the mechanism, because the role of markets would be marginalized if quantified emission reductions are not used as the main criterion to determine the transfer of resources to participant developing countries. In spite of this, there should be no confusion regarding the role of performance as a measure for these financial transfers, because performance-based and input-based approaches are not necessarily incompatible (in fact the CSE proposal intends to combine both). While quantified results achieved in terms of reduced deforestation could be part of the scheme, there is no reason why they have to be the only criterion used to initiate international transfers. If the CSE approach was ever used to determine the financial assistance to developing countries, we argue that it would constitute (i) a suitable framework for real collaboration towards the design of national strategies against deforestation, and (ii) the basis for predictable transfers to countries engaged in ambitious long-term policies and measures that aim for sustainable development that is compatible with the urgent need for action on climate.

We do not believe that a purely market-oriented REDD mechanism would provide the right conditions for the predictability of financing and for the encouragement of long-term domestic action in developing countries (market volatility being one among other reasons, as illustrated by the current financial crisis). We argue that indicators of performance, political

will and the capacity to act effectively, of which the CSE may be one element, will best serve the interests of tropical forests, climate and the populations that depend on them.

To conclude, we must consider that carbon markets *per se* are unlikely to lead to significant shifts in deforestation trends, and that alternative approaches will thus remain relevant in the negotiation process.

Technical problems

Any econometric analysis relies on a certain level of dataset quality. Random measurement errors affecting the dependent variable do not bias the results. We deal with idiosyncratic errors in the residuals when only considering and discussing residuals that are statistically different from zero.

Our results are not likely to be subject to autocorrelation problems, as claimed by Scriecu (2007), in so far as we deal with average values rather than annual values. The autocorrelation issue becomes crucial only when the frequency of data is increased. Nevertheless, we ran the model with an autocorrelation correction, i.e. white period standard errors and covariance correction, which did not alter the significance of our estimates.

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