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Alternative models for carbon payments to communities under REDD+: A comparison using the Polis model of actor inducements

Margaret Skutsch [a,b,*], *Ben Vickers* [c], *Yola Georgiadou* [d], *Michael McCall* [d,a]

[a] *Centro de Investigaciones en Geografía Ambiental (CIGA), Universidad Nacional Autónoma de México, Antigua Carreterra a Patzcuaro 8701, CP 58190, Morelia, Mexico*

[b] *Twente Centre for Studies in Technology and Sustainable Development (CSTM), University of Twente, The Netherlands*

[c] *The Centre for People and Forests (RECOFTC), Bangkok, Thailand*

[d] *Faculty of Geo-information Science and Earth Observation (ITC), University of Twente, The Netherlands*

ARTICLE INFO

Published on line 22 January 2011

Keywords:
REDD+
Payments for Environmental Services
Policy inducements
Carbon credits
Community Forest Management

ABSTRACT

Many tropical developing countries are considering using a form of Payments for Environmental Services (PES) to reward communities involved in Community Forest Management (CFM) for reducing carbon emissions and increasing carbon sequestration. Such payments would fall under the scope of national Reducing Emissions from Deforestation and forest Degradation (REDD+) programmes which will claim carbon credits or funding under future provisions of the UNFCCC (2009a). However, the implications of different systems of payment to communities have scarcely been considered. We suggest that there are at least three different bases on which payment could be made: payments for management *inputs*, for carbon *outputs* or for opportunity *costs* incurred. Almost all current PES systems involving communities are input payment based, although there are also a few proto-opportunity cost models; however it is usually assumed that carbon projects under REDD+ will be output (performance) based. We compare these three payment models with reference to criteria derived from the Polis model of public policy inducement (Stone, 2002), which facilitates a real world analysis in which the objectives of actors at different levels (international purchasers of carbon credits, national policy makers, intermediate agencies and local communities) and their interactions are considered. We conclude that output based payments may not be optimal for inducement of CFM carbon emission reduction and sequestration in national REDD+ programmes. We propose a system based on paying communities to measure and monitor their forest carbon stock, which could be combined with either input conditionalities or a bonus for good performance.

1. Introduction

Community Forest Management (CFM), under which common property resource management is formalised with meaningful delegation of decision-making power from the state to the communities using the forest resources, has been shown to be an effective policy instrument for reversing forest degradation and enhancing carbon stocks (Chhatre and Agrawal, 2009). It is

* *Corresponding author at*: Centro de Investigaciones en Geografía Ambiental (CIGA), Universidad Nacional Autónoma de México, Antigua Carreterra a Patzcuaro 8701, CP 58190, Morelia, Mexico. Tel.: +52 4331723235.
E-mail address: mskutsch@ciga.unam.mx (M. Skutsch).

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doi:10.1016/j.envsci.2010.12.005

thus understandable that countries as diverse as Cambodia, Mexico, Papua New Guinea, Tanzania and Vietnam have explicitly advanced CFM as an element of their national strategies for achieving Reduced Emissions from Deforestation and forest Degradation (REDD+) under future international agreements (UNFCCC, 2009a). This is demonstrated by their readiness plans submitted to the World Bank's Forest Carbon Partnership Facility and the UN-REDD programme.

Recognition of the potential for forest-dependent people to contribute to the sustainable management of forests is not new. Harnessing this potential contribution through appropriate policy instruments that reward good forest management practice is however not necessarily straightforward. CFM policy instruments are not permanent mechanical 'fixes' for forest management, but are really ongoing strategies for coordinating behaviour to achieve collective purposes. They evolve as behaviour and purposes change.

International REDD+ payments are likely to be made over to countries on the basis of average carbon gains over their whole forest territories in a given accounting period. If REDD+ is to succeed in stimulating effective CFM, mechanisms will be needed to channel rewards from the state to the communities. To be effective, such mechanisms must not only be perceived as fair by these communities, but must also recognise, and take account of, the inducements that all other involved parties require to ensure their participation in REDD+.

Countries proposing CFM as strategy within their REDD+ programmes have suggested using Payments for Environmental (PES) as the model, in which the service provided is carbon sequestration and storage in forest carbon pools (Angelsen, 2009). However, within this general concept there are many different ways in which payments could be made. Internationally, payments for carbon credits under REDD+ will be made on a strictly output basis (per tonne of carbon dioxide equivalent), and one option is that communities would also be paid by the state on this basis. However, almost all experience up to now on PES has been in terms of payments for inputs; land owners are paid a fixed amount per hectare to carry out or observe an agreed set of management practices. As we will show in the paper, other options are also possible. The different bases on which carbon payments might be made to communities have hardly been addressed in REDD+ literature to date, and need to be explored and evaluated.

The objective of the paper is therefore to compare different possible models of payments to communities for carbon services within national REDD+ programmes, and thus to develop insight into which models will be most effective in terms of incorporating CFM into REDD+. We do this as an analytic exercise based on theoretical reasoning rather than on empirical data, since there is very little experience with payments to communities for environmental services, other than input-based.

Instead of considering payments for carbon services as a voluntary market-based transaction, we view them here as a policy inducement, the commonest instrument for policy reform. This is a fundamental paradigm shift, not just a change in terminology. The shift enables us to tap into recent debates in policy science for a more realistic set of criteria with which to compare different payment options, taking into account the different objectives and interactions of actors at different levels in the REDD+ system (the international purchasers of carbon credits, national agencies which manage the REDD+ programme, intermediary agencies, and the local communities supplying the carbon services). We critically examine the assumptions of three types of payment system; output-, input- and opportunity cost-based, by means of the Polis model of inducements (Stone, 2002).

We contend that the Polis model allows for a real-world approach to the design of policy inducements as complex social processes rather than mere tools in the hands of policy-makers, where the nature of the ecosystem service is perceived differently by different actors. Consequently, the inducements needed to encourage them to cooperate in the delivery of this service also differ substantially. The political dynamics at the local, national and international levels are all essential in determining a workable system of service delivery.

The next section reviews the Polis model, comparing it with the more standard 'rationality' approach to inducement theory and justifying it as a more appropriate model for the analysis of this kind of problem in PES. We derive a set of criteria from the Polis model which will be used to compare the different payment options. The payment options for carbon for CFM are then explained in some detail in Section 3, and in Section 4 we apply the criteria to evaluate them. The insights from this analysis lead us to propose a number of quite different payment systems in Section 5. Section 6 considers the conditions that would be necessary for any payment system to be successful, and conclusions are drawn in Section 7.

2. Rationality vs. Polis models of public policy inducements

In the 1980s, policy scholars challenged the dominance of what Stone (2002) calls the ''rationality project'' of positivist policy science. Diverse contributions that came to be known collectively as ''post-positivist policy analysis'' include: participatory policy analysis (DeLeon, 1989), critical policy analysis (Dryzek, 1989), political decision making (Stone, 2002), the argumentative turn in policy analysis (Fischer and Forester, 1993), deliberative policy analysis (Hajer and Wagenaar, 2003), and most recently, deliberative ecological economics (Zografos and Howarth, 2008). As Hajer and Wagenaar (2003) put it ''*whatever reformulation of policy sciences we can come up with. . . it must be up to the task of understanding and furthering the interests of . . . real-world, conflict-ridden, living communities.*'' (pp. 27).

A key tenet of post-positivist policy science is that politics is not an unfortunate obstacle that messes up clear-headed, rational analysis and hence must be bracketed out from policy science, but a valuable creative process (Stone, 2002). Policy analysts have a responsibility to reveal and clarify disputes over policy values, particularly where such disputes arise from a lack of clarity, or of understanding, regarding the science that underpins policy development. The model of society in Stone's research is the *Polis*. The *Polis* represents the groups within society which debate the criteria, categories and (most importantly) the ideas which contribute to policy formulation. Stone uses the ''market'' model of society as a foil because it underpins the ''rationality project'' of standard policy discussions. In a ''market'' model of society, rational actors pursue their own self interest by trading with others.