

Market Masquerades: Uncovering the Politics of Community-level Payments for Environmental Services in Cambodia

Sarah Milne and Bill Adams

ABSTRACT

A growing number of Payments for Environmental Services (PES) schemes are being implemented at the community level in developing countries, especially in the context of climate change mitigation efforts to Reduce Emissions from Deforestation and forest Degradation (REDD). In parallel, there is vigorous commentary about the implications of market-based or neoliberal conservation strategies, and their potential effects on communities that depend on natural resources. This article explores the political dimensions of community-level PES in Cambodia, where contracts for 'avoided deforestation' and 'biodiversity conservation' were implemented in five communities. The research examines three aspects of the community-level PES model that are inherently political: the engagement of communities as single homogeneous entities, capable of entering PES contracts; the simplification of land-use practices and resource rights; and the assumption that contracts are voluntary or reflect 'community choice'. These elements of PES work both discursively and practically to silence certain voices and claims, while privileging others. Therefore, the problematic nature of community-level PES is not that it is a market *per se*, but that it is a powerful intervention masquerading as a market. This process of 'market masquerades' emerges as a key element in the politics of neoliberal conservation in practice.

INTRODUCTION

Payments for Environmental Services (PES) have become an important tool in contemporary conservation, especially with the rise of climate change mitigation mechanisms that harness payments for 'Reducing Emissions from Deforestation and forest Degradation' (REDD). Significant investments are now being made in PES and REDD implementation, particularly in tropical developing countries. Most observers agree that these investments will have

We would like to thank the editors of this special issue and two anonymous referees for their helpful and insightful comments on earlier drafts of this paper. The first author received research funding from the General Sir John Monash Foundation, and is very grateful for its support. Thank you also to Anna Hutchens, Judith Pabian and Justin Welbergen.

Development and Change 43(1): 133–158. DOI: 10.1111/j.1467-7660.2011.01748.x

© 2012 International Institute of Social Studies.

Published by Blackwell Publishing, 9600 Garsington Road, Oxford OX4 2DQ, UK and 350 Main St., Malden, MA 02148, USA

profound social and political effects, although what form these will take is still unclear (McGregor, 2010; Redford and Adams, 2009).

Many PES and REDD projects will operate at the community level, due to the prevalence of communal property rights and social relations in forest settings. This prospect has sparked lively debate, especially in the context of REDD. Some argue that REDD could significantly strengthen support for community-based natural resource management and livelihoods (Agrawal and Angelsen, 2009), while others speculate that it could lead to a 're-centralization' of decision making and rights over forests, and a loss of community control over natural resources (Phelps et al., 2010; Sandbrook et al., 2010). These types of concerns have led to a burgeoning literature on how to design REDD and PES to avoid social harm and benefit local communities (e.g. Angelsen, 2009; Brown et al., 2008; Wunder, 2008). However, few design recommendations draw on empirical research into PES or REDD in practice, meaning that the implications for local communities remain only partially understood. Furthermore, the significance of this new policy configuration, which integrates community-based conservation and environmental markets, has not yet been theorized fully in the context of neoliberal conservation.

This article therefore explores the social and political dimensions of a 'REDD-like' PES scheme in Cambodia, where payments for avoided deforestation and biodiversity conservation were made to communities in the Cardamom Mountains. PES and REDD both depend on the creation of environmental markets, and form key examples of the extension of neoliberal approaches within conservation (McElwee, 2011). One feature of neoliberal discourse is the way it privileges 'the market' as an institution for delivering public goods, and as a model for project interactions and interventions in general (McCarthy and Prudham, 2004). Thus project politics can hide behind a technical facade (Büscher, 2010), appealing to the apparently natural and objective qualities of market forces, and creating a convincing but deceptive 'masquerade'. We examine this process here, exploring how market-style or neoliberal conservation can powerfully re-shape nature-society relations, while simultaneously disguising its political nature behind the market metaphor.

PAYMENTS FOR ENVIRONMENTAL SERVICES

PES is now being widely explored as a new mechanism for enabling biodiversity conservation, often at the community level (Nelson et al., 2009; Sommerville et al., 2010). Similarly REDD schemes, which are designed around the PES model, are being embraced as a way to protect forests. PES has been described as involving voluntary and conditional contracts in which a well-defined environmental service is purchased by a willing buyer who then secures provision of that service from a willing seller (Ferraro, 2001;

Wunder, 2005). However, in practice most PES arrangements do not comply with these strict theoretical conditions (Muradian et al., 2010).

Interest in PES reflects the rapidly growing importance of the concept of environmental or ecosystem services following the Millennium Ecosystem Assessment (*Nature*, 2009; Sukhdev, 2009), and particularly its adoption by conservation scientists and planners as a way of representing the importance of biodiversity and environmental values to society (Menzel and Teng, 2009; Naidoo et al., 2008). Importantly, the PES mechanism provides a framework for environmental services to be valued economically and secured through market transactions.

The distinguishing features of PES are that contracts are voluntary and payments are conditional upon performance (Ferraro and Kiss, 2002; Wunder, 2005). In community-level PES, this means that 'communities' must enter environmental services contracts voluntarily, and they must be rewarded and held accountable as a whole (Milne and Niesten, 2009; Nelson et al., 2009; Sommerville et al., 2010). In comparison with community-based natural resource management or Integrated Conservation and Development Projects (ICDPs), this conditional and contractual approach toward community engagement is a distinguishing feature of community-level PES. The effects of PES on community participation and rights in natural resource management have not been examined systematically, but the potential for communities to fall into unfair agreements due to asymmetrical power relations has been noted (Romero and Andrade, 2004), and in the context of REDD this has led to recommendations for Free Prior and Informed Consent (FPIC) to be a guiding principle (Brown et al., 2008). By focusing on power relations in the implementation of community-level PES, this contribution highlights the potential pitfalls and implications of operationalizing FPIC in the context of REDD. More broadly, it explores how the attempt to create environmental markets through community-level contracts generates particular side-effects (Ferguson, 1990), which are symptomatic of neoliberal conservation.

PES and Neoliberal Conservation

PES is an important feature of arguments about the wider 'neoliberalization' of conservation and environmental management. Neoliberalism in conservation is diversely manifested, but frequently involves the displacement of the state as conservation actor by private sector and non-government organizations (NGOs), and the adoption of market-based approaches rather than regulation as a means of achieving conservation goals (Brockington and Duffy, 2010; Büscher, 2008; Igoe and Brockington, 2007). Neoliberal interventions around the environment are significant because of their potential to reshape nature–society relations through processes such as privatization and commodification (Castree, 2008; Heynen et al., 2007; McCarthy

and Prudham, 2004), which ultimately open new spaces for capital expansion (Corson, 2010). In this context, PES is conventionally analysed as a product of neoliberal thinking about the ability of markets to solve environmental problems (Büscher, forthcoming; Robertson, 2004).

The political dimensions of PES are revealed (among other ways) when we consider how its implementation can lead to the simplification of social and ecological complexity, and the advance of powerful and/or capitalist interests. For example, the expansion of markets in ecosystem services involves the narrowing down of complex ecosystem processes into identifiable and measurable services, and the reductionism of monetary valuation of those services (Muradian et al., 2010; Robertson, 2006). Critics also point to the way PES masks social relations that underlie processes of production (Kosoy and Corbera, 2010), and warn of the potential negative effects of marketization for equitable and ethical environmental management (Heynen et al., 2007; Igoe and Brockington, 2007).

However, while PES exemplifies the neoliberal stream in conservation and may be recognized as the 'next generation' policy model in community conservation (Ferraro and Kiss, 2002; Hutton et al., 2005), it cannot necessarily be described as neoliberal or market-based in a simplistic way. For example, McAfee and Shapiro (2010) note that in Mexico, although national PES programmes were conceived of as market-based instruments, in practice they became hybrids of market-like mechanisms, state regulation and subsidies. Similarly, analysis of community-level direct payments schemes in biodiversity conservation reveals a continuum of policy narratives between 'indirect' and 'direct' approaches (Milne, 2009), where the distinction between project and market-based approaches is hard to draw. This blurring of policy narratives is especially common in community-level PES schemes, in part because they require project-based systems of community engagement to be implemented, but also because payments or benefits are frequently provided in kind as community development projects (Milne and Niessen, 2009). A similar trend has been noted for community payments under REDD schemes, leading to suggestions that in practice they resemble ICDPs rather than PES (Madeira, 2009). Thus, the preoccupation of critical scholars with *environmental markets* and their effects is not fully relevant or helpful for understanding the implications of PES for communities and conservation. Rather, as this article will demonstrate, the significance of the PES policy model lies in the political and social effects of its design and implementation, not in its functioning as a market *per se*.

For this reason, our analysis of the politics of community-level PES focuses on how elements of the PES model shape project practices, and in turn have certain social or political consequences. We work from the premise that policy models in conservation and development are discursive and are therefore inherently political in the way that they produce and frame local realities, making intervention both justifiable and possible (Li, 2007; Scott, 1998; Shore and Wright, 1997). A key concept here is Ferguson's

‘anti-politics’ (1990), whereby technical and bureaucratic discourses serve to depoliticize interventions on the one hand, whilst simultaneously generating particular social side-effects or ‘instrument effects’ that advance regimes of power and knowledge on the other. While familiar in development studies, the concept of anti-politics has only recently been used in the context of neoliberal conservation. For example, Büscher (2010: 35) observes: ‘Neoliberals try to replace political debate over the distribution of interests and power by “marketized” political mechanisms that enable the quantification and “trading” of interests and value conflicts through commoditization’. Thus, Büscher argues, it is vital to examine the ‘anti-political tendencies’ of neoliberal conservation. Our study responds to this call by exploring the discursive workings and practical effects of community-level PES in Cambodia.

Below we introduce the case study, illustrating how the theoretical idea of PES was translated into a practical policy model for implementation. We then examine how the model was mobilized in the field, focusing on the relationship between *policy* and *practice*. This analytical approach is inspired by Mosse (2005), who suggests that policy models act primarily as metaphors to guide the representation of complex field projects. In this case, the metaphor is that of a market transaction: it provides the script for conservation actors and communities to follow, uniquely shaping their market-like exchanges as natural and rational, while disguising struggles and anomalies. We explore the politics behind the resulting ‘market masquerade’, focusing upon the practical effects and implications of three key aspects of the PES model: the engagement of communities as single actors; the simplification and formatting of land-use problems; and the notion of voluntary agreements or ‘community choice’. Our analysis seeks to penetrate the masquerade of PES and the presumed efficacy of market-based conservation, to examine instead the discursive nature of PES and how this impacts communities and conservation.

RESEARCH APPROACH AND METHODS

This article results from long-term research into the design, implementation and impacts of a community-level PES scheme in Cambodia. The scheme was initiated and funded by a US-based conservation NGO.¹ Field research in Cambodia and the US was conducted over the period 2006–07. The research involved complex issues of positionality. The first author had prior involvement in the project from 2002–05, meaning that significant

1. The NGO is not identified here, and all references to official documents are treated anonymously. This is the choice of the researchers. We do not believe that our arguments would be strengthened by specific identification of the organization concerned, or by the identification of any of our respondents.

background knowledge about the project was available, along with easy access to project staff and villagers. We recognize that this level of personal involvement in 'the field' shapes researchers' perceptions, and can influence how they are treated by research subjects (Denzin and Lincoln, 1998). To address this, the first author openly acknowledged her previous role with all participants in the research process, and explained her new status as an independent and 'unaligned' researcher. This led to open and candid dialogue in almost all interviews. We have made every effort to represent events and people's voices in an objective way.

A range of research methods were used. Semi-structured interviews were conducted with over twenty-five community representatives, who were directly involved in negotiating and implementing the PES agreements. They communicated openly about their experiences of the project, describing local decision making and community participation that occurred during implementation of the PES agreements. All NGO and Cambodian government staff involved in the scheme were interviewed. Interviews were conducted with 120 villagers who were subject to the agreement's conditions and benefits, but who were not involved in agreement implementation *per se*. Villagers were asked about their perceptions and knowledge of the agreements, as well as the livelihood impacts they experienced.

Ethnographic data were also collected through participant observation at project meetings, especially agreement negotiation meetings between project staff and community members in March 2007, in five locations. At these meetings, decisions were made about the definition of conservation services and avoided deforestation; payment amounts and benefit packages; contract terms; and sanctions to be implemented if communities did not adhere to conservation commitments. This provided an opportunity to observe interactions and power relations between 'buyer' (the conservation organization), and 'seller' (the community). Follow-up interviews were conducted with key project staff and villages in 2010 and 2011.

THE PES SCHEME

The PES scheme in Cambodia was implemented under a global programme by a prominent US-based conservation NGO in partnership with the Cambodian Government's Forestry Administration. It was designed by the NGO's head-office staff in Washington DC in late 2005, and financed by a US philanthropic foundation. The Cambodian project was among the first implemented, and represents an early and innovative attempt to implement community-level agreements for avoided deforestation. The project design received much attention and input from policy makers at the NGO's head office, and it was influenced directly by ideas emerging from the World Bank, donors and international consultants (Milne, 2009). Thus the project in Cambodia represents an attempt to implement what was 'cutting edge' PES

thinking in 2005–06; and this coincided with the emergence of REDD in international policy circles and climate negotiations. The project in Cambodia is considered highly successful by its implementers. Promotional material claimed in 2011 that agreements covered 150,000 hectares of forest in the Cardamom Mountains, including the nests of critically endangered Siamese Crocodiles. Agreements are being renewed until late 2012, with the expectation of further annual renewals, eventually to be funded through a sustainable financing mechanism.

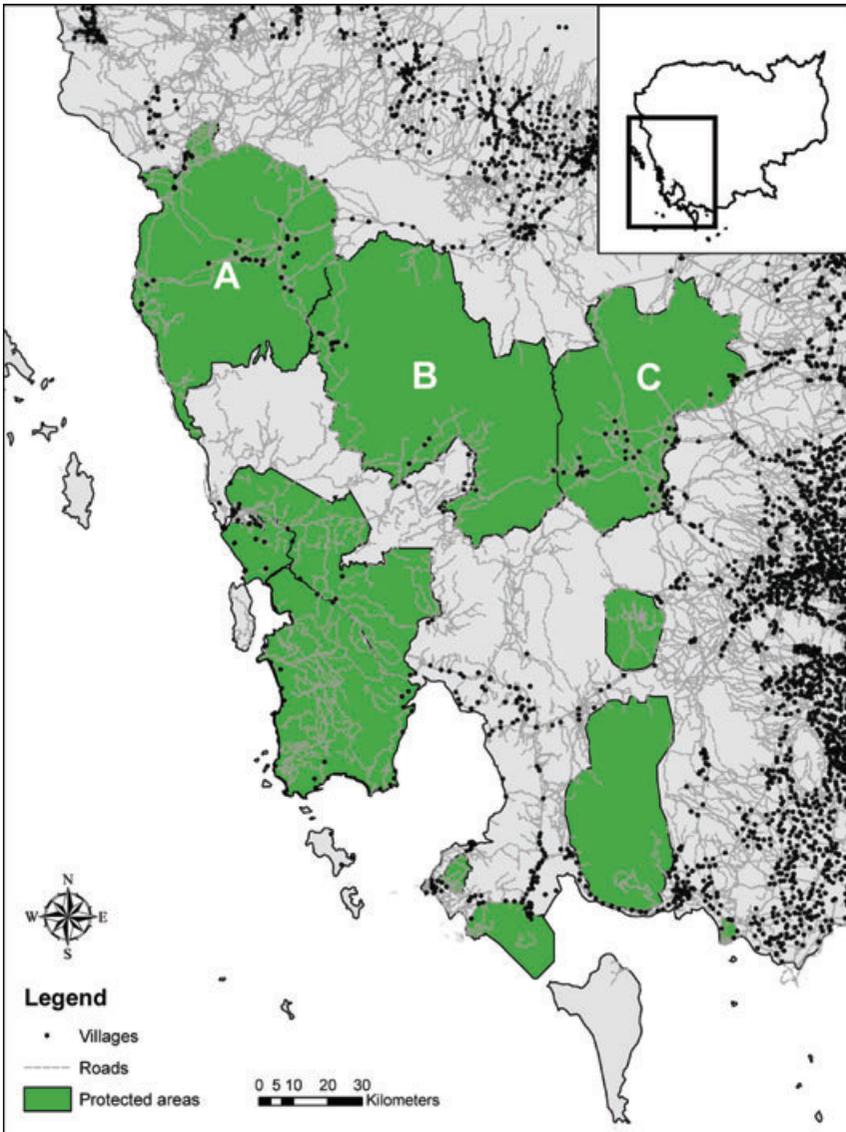
The PES scheme is based on the NGO's policy model of conservation agreements, which intends to: 'Conserve biodiversity as a community choice, by building agreements that provide communities with benefits and capacity building in exchange for delivering effective conservation of high priority areas and species'.² The key elements of PES are evident in this definition: 'community choice' indicates that agreements are voluntary, and the provision of benefits 'in exchange for' conservation services indicates conditionality. The idea of community choice is further reinforced by the model's 'guiding premise' that: 'People will conserve if the benefits outweigh the costs of doing conservation and if they have the option to do so'.³ Here, project documents make reference to choice theory in economics (Samuelson, 1948), which assumes that rational individuals will choose to maximize utility. Thus, the role of conservation agreements is to enable rational 'community choice' in support of conservation, given the provision of sufficient incentives. The economic concept of compensating for 'opportunity costs' is also invoked by the model's notion that benefits to communities must 'outweigh the costs' of conservation.

Project Background

The PES scheme in question falls within a larger conservation project in the Cardamom Mountains, southwest Cambodia. This project focuses on management of the Central Cardamoms Protected Forest, an area of 4,020 km² that was officially created from suspended logging concessions in 2002 (Area B in Figure 1). The area is part of the Cambodian Forest Estate and is officially managed by the national Forestry Administration (FA), with funds and technical support from the NGO. In this partnership, the FA takes responsibility for protected area management activities such as patrolling, while the NGO has focused mainly on community engagement. The PES

-
2. NGO document 'Conservation Agreements: Model, Design and Implementation' (2006). This is a policy guide for field staff implementing the NGO's PES programme in over ten countries.
 3. NGO PowerPoint presentation 'Conservation Agreements description and implementation plan' (2005). This was delivered at a workshop to all staff involved in the PES programme.

Figure 1. Protected Areas in the Cardamom Mountains (areas A, B, C), Southwest Cambodia



scheme is therefore integrated into protected area management, but it has been principally designed and managed by NGO staff.

The community-level PES scheme is in the southern section of the protected area. Target villages are either inside the protected area (within 10 km

of the boundary) or in its buffer zone (within 5 km of the boundary). The villages belong to one district, which partially overlaps with the protected area, and comprises five communes with a total population of around 2,500 people. Communes are the standard rural administration unit across Cambodia. In the southern Cardamom Mountains, each commune contains two to four villages of varying size, ethnicity, remoteness and economy. At the time of the research, three of the five communes had no road access, meaning that local residents were almost entirely dependent upon subsistence rice production and forest products. Only lightweight high-value products (e.g. resin or cardamom) were traded by villagers in these areas, who transported goods by foot or motorbike to the nearest road, taking one day per trip. Essential household items were brought in by villagers, some of whom operated small shops.

Local residents are predominantly indigenous *Khmer Daeum* people (Martin, 1997), who traditionally practise shifting agriculture. With logging activities and improvement of roads since 1997, ‘newcomers’ from other provinces have also arrived in the area to take advantage of plentiful forest products and fertile land. None of the area’s residents have formal property rights; however, there is *de facto* ownership of established farms, and a range of contested claims over pre-war farms and recently opened ‘illegal’ plots in the Forest Estate. When the protected forest was created there were conflicts between conservationists and residents, especially over local demands to access forest resources and practise shifting agriculture, both essential livelihood activities. Early community engagement efforts (2002–05) were directed towards conflict resolution and ‘participatory land-use planning’ to identify and assert local resource rights across a range of land and forest use types. This resulted in maps with various land-use categories such as secondary forest, fallow (with forest or grass), current shifting agriculture plots, old rice paddy, spirit forest, burial forest, and various forest zones for fuelwood and forest product collection.

PES Contracts

Initial community engagement activities included various participatory processes, especially land-use planning, which led to the formation of local representative organizations called Commune Natural Resource Management Committees. These committees were intended to be civil society groups, supported by the NGO, with a mandate for natural resource management and government liaison. This approach represents a classic community-based natural resource management strategy, aimed at strengthening local resource rights and capacity to manage forests and biodiversity (Brosius et al., 2005). The creation of committees and land-use maps laid the foundation for the PES scheme that followed in 2006.

Table 1. Summary of Conservation Agreements in the Study Communes

| Commune (name and size) | Conservation Services | Annual payment | Sanctions |
|-------------------------------|---|--|---|
| Trei 113 families | - Protect dragon fish spawning pools; no dragon fish harvesting - Assist FA to combat illegal hunting and wildlife trade - No forest clearing | US\$ 17,050 incl. purchase of mechanical tillers; wages for community patrolling; and support for school teacher | Sanctions depend on number of transgressions. If ten transgressions occur the agreement is suspended. |
| Svay 76 families | - No forest clearing for farms - Protect crocodile and its habitat along the river - Assist FA to combat illegal hunting and wildlife trade | US\$ 8,788 incl. mechanical tillers for paddy restoration; wages for community patrolling; support for school teacher | Sanctions depend on number of transgressions. If ten transgressions occur the agreement is suspended. |
| Pdao 272 families | - Assist FA to combat illegal hunting and wildlife trade - No hunting, snaring, logging or wildlife trading | US\$ 7,160 support for school teachers; wages for community patrolling; individual cash incentives for all households | If five transgressions detected, then cash bonus is suspended and patrolling cancelled for following year |
| Arak 135 families | - No forest clearing for farms - No hunting - Assist the FA to combat illegal hunting, logging and wildlife trade | US\$ 8,588 incl. US\$ 3,200 cash to community fund; wages for community patrolling; and support for school teachers | If five transgressions detected, then payments are suspended and patrolling cancelled for next year |
| Krobey 182 families | - No forest clearing for farms - No hunting - Assist the FA to combat illegal hunting, logging and wildlife trade | US\$ 18,360 incl. mechanical tillers for paddy rice; construction of school and support for teachers; patrolling wages | If five transgressions detected, then payments are suspended and patrolling cancelled for next year |

Notes:

Communes have been given pseudonyms.

Contract terms are sourced from the NGO's English translations of agreements.

There are now five conservation agreements at the project site, implemented at the commune level. This is a convenient basis for implementing agreements, but communes are not naturally occurring social groups or 'communities'. This raises particular issues, explored below. Each agreement includes commitments to stop forest clearing, hunting and poaching for wildlife trade: these are the 'conservation services' provided by communities. In addition, special measures for the protection of two critically endangered species are included in two of the communes: these are the Siamese crocodile (*Crocodylus siamensis*) and the Asian Arowana or Dragon Fish (*Scleropages formosus*). A summary of the 2010 conservation agreements is provided in Table 1. The agreements have varied little in content since they were initiated.

Agreement benefits or payments were calculated to match the opportunity cost of conservation. For the avoided deforestation components this calculation was based on the value of expected rice yields from newly cleared land. For example, in Svay commune,⁴ annual clearing due to shifting agriculture by sixty-five families was estimated to amount to 20 ha per year. On the basis of average rice yields of 1.5 tonnes per ha, normally achieved on recently opened plots, the cost of not clearing forest was estimated to be 30 tonnes of rice per year, or US\$ 3,000 given local market prices. Thus, the opportunity cost of stopping deforestation was considered to be US\$ 3,000 per year, and this was the compensation payment provided to Svay under the conservation agreement. Although project managers recognized that the opportunity cost calculations were not technically accurate, they were used to negotiate the commune's 'willingness to accept' price for commitments to stop deforestation.

Importantly, commune leaders were engaged by the NGO in these opportunity cost calculations, and they provided estimates of annual forest clearing and rice yields. Certain local leaders readily saw these calculations as a way to leverage benefits through the conservation agreements, primarily to increase their own prestige and political influence. They also saw the opportunity to shield their political calculations through an 'anti-politics' of technical calculation. The political dynamics involved are explored below.

POLITICAL DIMENSIONS OF THE SCHEME

The political dimensions of the PES scheme in Cambodia manifest themselves in two ways. First, they are manifest in the discursive realm, where policy discourses function to frame problems and enable intervention (Foucault, 1979; Shore and Wright, 1997). Policy models are considered inherently political because of the way that they can 'render technical' and simplify complex and politicized field problems, while also constructing a 'realm of intervention' to which policy can be applied as a solution (Li, 2007). In the context of global conservation, a key issue is that policy models often embody assumptions about local communities, environmental change and human behaviour, which means that they can silence and constrain local actors in the conservation process (Blaikie, 2006; Brosius, 1999; Bryant, 2002). For this reason, the discursive dimensions of community-level PES require scrutiny.

The second way in which community-level PES becomes politicized is through 'project practices', which determine how policy is interpreted, mobilized and used on an everyday basis. A focus on practice is essential, given critical insights from the anthropology of development that question the

4. Pseudonyms are used for the names of the communes.

supposed centrality and importance of policy in determining project outcomes (e.g. Mosse, 2004, 2005; Quarles van Ufford, 1993). For example Mosse (2005) suggests that the main function of policy models and their counterpart ‘project designs’ is to provide coherence and purpose to project activities, primarily in order to meet organizational needs. Thus, as noted above, policy models like PES serve as metaphors to interpret or ‘translate’ the messy realities and complex processes of project implementation into ‘authorized categories’ for project actors (ibid.). The discursive aspects of community-level PES are therefore actualized and reinforced through project practices and constructs, such as community committees, opportunity cost calculations and agreement negotiations. For this reason, ethnographic observations of project processes were used as an essential counterpart to analysis of the policy model itself.

Our analysis examines how both political modes (discourse and practice) shaped power relations and interactions between communities and project implementers, guiding the enactment of a market transaction through three distinct project elements: (i) the attempt to engage communities as single rational actors; (ii) the formatting of environmental problems, to make way for structured payments-based solutions, especially for ‘avoided deforestation’; and (iii) the notion of ‘community choice’ or voluntary agreements.

Engaging Communities as Single Actors

In the field of conservation and development scholars have long recognized that communities are not homogeneous or naturally occurring entities (Agrawal and Gibson, 1999; Brosius et al., 1998). The romance and convenience of community has meant that simplified and idealistic notions of communities have persisted in community-based natural resource management, often leading to misrepresentations or ‘strategic simplifications’ that can be disempowering for community members, yet advantageous or even essential for project implementation (Blaikie, 2006; Li, 2002). Simplified notions of community persist in conservation and development policy, and we show that they are also fundamental to the formulation of community-level PES and REDD schemes.

The policy model used in Cambodia relies explicitly upon an idealized notion of community. Project documents refer to ‘communities’ that are willing to enter conservation agreements freely: ‘The. . . program idea is to conserve biodiversity as a *community choice*, by building agreements that provide *communities* with benefits and capacity building in exchange for delivering effective conservation of high priority areas and species’ (emphasis added).⁵ This language was used in project activities, funding proposals and meetings with community representatives. Furthermore, NGO staff

5. NGO document ‘Conservation Agreements: Model, Design and Implementation’ (2006)

admitted that they deliberately avoided problematizing or questioning the idea of community that was enshrined in the project model, in spite of the practical difficulties they faced in dealing with ethnically mixed or internally conflicted communes. Thus, for organizational and project implementation purposes, communities were constructed as naturally occurring, homogeneous entities.

The programme's reliance on the idea of community derives from the technical requirements of the PES policy model. PES contracts are premised upon the existence of a single seller or service provider, who can enter into an agreement with a single buyer (Wunder, 2005). Therefore, in order for community-level PES to be implementable, communities must be engaged as single actors. This means that project implementers must first identify and define the 'community' they wish to work with, depending upon local resource use, social organization and/or administrative structures. Second they must create and engage local representative organizations or committees that can make decisions on behalf of the target community, thus enabling the community to function as a single entity (Milne and Niesten, 2009). The practice of 'committee making' is widespread in participatory development, because it makes community-based interventions possible (Cleaver, 1999). However, it is also recognized as problematic for equitable or empowering participation, due to the usually elite associations of committee members (*ibid.*). Similar issues were evident in the Cambodian case, as the NGO had to craft and represent 'communities' around the requirements of the PES model. The outcomes of this process were inevitably shaped by pre-existing local power structures, illustrated below.

As already noted, communities in the PES scheme were defined on the basis of communes, formal government administrative structures. Agreements were implemented at the commune level, through representative bodies that could negotiate and sign contracts on behalf of commune members. This was achieved through two representative organizations in each commune: (i) Commune Natural Resource Management Committees, civil society organizations responsible for agreement implementation; and (ii) Commune Councils, government bodies able to act as legal signatories for the 'the community'.

The Commune Natural Resource Management Committees were created by the NGO through democratic elections, initially for participatory land-use planning activities (Rock, 2001). Committees were elected in all five communes over the period 2003–06. According to project documents from the time, their original role was to enable 'community participation and empowerment' in natural resource management. However, with the introduction of conservation agreements in 2006, a new contractual and conditional mode of community engagement emerged, which gradually transformed the function and purpose of the committees. For example, with the NGO now acting as a buyer of conservation services, committees were given a 'terms of reference' under the agreements which included such tasks as: demarcation

of forest boundaries; distribution of benefits from conservation agreements; community patrolling in forests; reporting of illegal activity and agreement violations to local authorities; and raising awareness among villagers about the agreement. These tasks were defined by the NGO as a set of conservation services, and if they were not delivered then payments could be withheld.

Thus, the committees that were originally created to enable community-based action in natural resource management were transformed discursively and practically into contractors or service providers, as a result of the PES model. More fundamentally, this shows how the nature of community participation in conservation is altered by PES-like models which reconfigure participation into a set of engagements between buyer and seller. This depoliticizes and sanitizes community-based conservation, by removing the need to consider explicitly local voices and resource rights. In other words, community participation is ‘by contract’, rather than through transformative process. In this way, community representatives are denied agency, as they are transformed into service providers for the conservation organization. These political processes are hidden by the anti-politics of PES (cf. Büscher, 2010).

More problematic, however, was the use of Commune Councils as the ‘official’ representatives of local communities, who could sign-off on the PES contracts. These government bodies, created under the national decentralization and democratization programme in Cambodia in 2002, are heavily influenced by party politics and powerful local elites (Blunt and Turner, 2005). For project legitimacy it is necessary to cooperate with Commune Councils, but the project’s assumption that they act as community representatives in the democratic sense is flawed. Rather, Commune Councils tended to facilitate entrepreneurial and state interests in the area, according to widely recognized but dynamic norms of patronage in Cambodia (Blunt and Turner, 2005; Ledgerwood and Vijghen, 2002; Öjendal and Sedara, 2006). As a result, the PES contracts provided commune councillors with the opportunity to increase their political power by associating themselves with the distribution of benefits to local villagers. Furthermore, they were uniquely positioned to ensure that the PES contracts did not threaten the activities of local elites, which frequently included land clearing and wildlife trade. For example, in Pdao commune in 2005–07, a very powerful local businessman with links to the dominant Cambodian People’s Party (CPP) violently threatened the local representative committee, and forced less powerful committee members associated with the opposition political party (FUNCINPEC) to step down from their involvement in the conservation project. Similar dynamics were evident in other communes;⁶ in this way

6. For example, in Arak, the CPP-backed deputy commune chief dominated agreement negotiations in 2006 and pushed for community payments to be delivered as a micro-finance scheme, which he hoped to control in the lead-up to the 2007 Commune Council elections. When the NGO refused, he used his power to block Commune Council approval of the agreements, causing a one year delay.

community representation and PES negotiations were shaped by powerful local interests, rather than by the needs of villagers or less politically motivated committee members.

These examples highlight the political consequences of *the idea of community* which, when mobilized through the creation of local organizations, works to disguise the micro-politics of conservation on the ground. The situation in Cambodia provides a strong example of how this can undermine well-intended projects. For example, recent field visits (2010–11) indicate that the committees and Commune Councils are now largely dominated by elites, who in spite of the PES contracts are able to continue their own land-clearing activities unhindered. These ‘elites’ vary in wealth and stature between communes, but they are generally entrepreneurial landowners with connections to the CPP and government. They can therefore influence local decision making and law enforcement for their own benefit, particularly in relation to land and natural resources. Thus, poor and powerless community members are subject to the PES conditions, but their leaders are not. This kind of injustice is endemic in Cambodia, and by no means unique to PES, but it does demonstrate how social justice can be undermined when diverse and conflicted groups of people are forced to function as single entities. Such circumstances also create the potential for conflict within ‘communities’. No open conflicts of this kind have been observed at the field site, but villagers readily expressed discontent about the behaviour of local elites, government officials and the FA behind closed doors.

To summarize, the model of community-level PES requires project implementers to simplify or ‘black box’ communities, so that they become single homogeneous entities, capable of entering contracts and responding as ‘rational’ economic decision makers. In Cambodia, this was achieved through committee making and engagement of local government structures. The effect was to constrain and format community participation in such a way that possibilities for local agency and dissent were almost extinguished. This disempowering effect is arguably a particular feature of PES at the community level. That is, powerful buyers or project implementers in effect *define community* by choosing which representative structures they engage, and they also *set the terms* of community engagement based on contractual needs. Through this process, community participation becomes a depoliticized form of service provision, which is stage one in the anti-political market masquerade.

Formatting of Problems and Solutions around the Idea of ‘Avoided Deforestation’

Problem definition forms the basis for all intervention, whether environmental or social (Ferguson, 1990; Li, 2007). In the context of conservation and development, scholars have observed how the discursive processes of

problem definition and policy formulation can systematically favour Western knowledge over local perspectives (Blaikie, 2006; Brosius, 2006; Bryant, 2002). Furthermore, in considering PES, Robertson (2006) shows how the complexities of nature are simplified so that they can be 'seen' by capital, or made 'legible' for environmental markets (following Scott, 1998). An awareness of the politics of knowledge in conservation practice is emerging, with calls for more considered treatment of complexity (Hirsch et al., 2011). Nevertheless, for PES and REDD to be implementable, simple and technical definitions of 'forest' and 'deforestation' are required, along with specific measures for conservation services. Below we illustrate how these processes subtly commodify and hide the human place in nature, while also depoliticizing land-use change.

As we have begun to show, the market-based configuration of PES empowers buyers to define and operationalize contracts, advancing the notion of 'community as service provider'. Here we elaborate on how buyers also define the environmental services that they wish to purchase, in a measurable way. By default, this requires them first to define the environmental problem that needs to be solved. In the Cambodian case, most of this discursive work of problem definition and conceptualization of conservation services occurred before communities were approached. It was carried out by a combination of economists at the NGO's head office, expatriate staff in Cambodia, foreign biologists and government staff. Thus, community perspectives were excluded from the knowledge-producing acts of interpretation and simplification, which were used to define 'deforestation' and threats to biodiversity. PES models therefore empower buyers to define the nature that they want to save and how, while leaving little scope for participatory or bottom-up natural resource management.

The formatting of knowledge in this case was determined by the NGO's use of the PES model. Field staff were provided with a standardized 'agreement matrix' from head office to complete, as part of the PES design process. The matrix (see Table 2) forced staff to think in terms of categories such as 'conservation target', 'opportunity cost' and 'community obligation', ideally measured using quantitative units or simple indicators. The conservation target adopted was 'number of hectares of forest protected' per annum, which was chosen to meet head-office monitoring needs, in spite of other (less standardized) conservation goals like protecting crocodiles and dragon fish. This specific and reasonably easy-to-measure target enabled a simple conservation solution: the calculation of monetary compensation necessary to persuade local people to stop cutting forest. In addition, the policy language of 'number of hectares protected' under the agreement implied a relinquishing of forest claims by community members and a degree of permanence to the conservation arrangement, which was never explicitly discussed. This mixing of protectionist conservation narratives with market-based approaches requires further investigation.

Table 2. Conservation Agreement Matrix from 2007 Project Document

| Conservation target (ha) | Threats | Community obligation | Opportunity cost of doing conservation | Benefits proposed | Cost of benefits | Enforcement required (patrolling) | Risks |
|----------------------------|---------|----------------------|--|-------------------|------------------|-----------------------------------|-------|
| Forest area protected (ha) | ... | ... | \$ | ... | \$ | ... | ... |

The simple and elegant solution suggested by the agreement matrix had problematic side-effects. The abstraction into hectares, dollars and transactions subtly changed the way in which conservation and nature–society relationships were conceived by both project staff and local actors. For example, the concept of ‘hypothetical land clearing’ was new for villagers, and so was the idea that they could seek compensation for ‘what they did not do’. This new reasoning introduced a capitalist and exploitative vision of forest and land that had never been fully articulated, given traditional land-use dynamics of shifting cultivation, subsistence and communal tenure. This powerful vision of a forest with potential financial value presumes an understanding of nature as a commodity, and a relationship between people and nature that is mediated by essentially material concerns about economic costs and benefits. This is one of the perverse side-effects of PES: villagers’ motivations to conserve forest are presumed to result primarily from the financial incentives provided by the conservationist-buyer. This sidelines other potential motivations for local people to conserve, for example those resulting from relationships to land that are non-marketized or determined by values of custodianship. Such motivations to conserve are grounded in culture, agency and self-determination, which PES models fail to recognize or encourage. This subtle and disempowering ‘closure’ of conservation options is a distinct side-effect of PES, and it illustrates how the marketization of conservation action can depoliticize powerful interventions that attempt to change relationships between people and nature.

The processes of quantification and monetization also disguised the complexity of people’s livelihoods and relationships to forests. For example, the PES model’s focus on compensation for avoided deforestation could not accommodate local understandings and uses of forest, nor did it allow for dynamic property relations associated with shifting agriculture, non-timber forest products, and competing land claims typical in post-war Cambodia. Indeed, the model’s binary notion of ‘forest’ and ‘non-forest’ created and imposed new conceptions of land use and agriculture, whereby communities were expected to sedentarize and intensify their rice production while reducing shifting agriculture. This trend towards separating people and forest has been associated with neoliberalism elsewhere in Southeast Asia (Dressler and Roth, 2011), but not in association with PES.

In Cambodia, the binary formatting of land use resulted in two unfortunate side-effects. First, by forcing the definition of a forest boundary in order to implement PES, government actors were able to step in and silence local claims to fallow and old pre-war farmland that appeared to be 'forest'. Although these local claims to forested land had been mapped in the earlier 'participatory land-use plans' of 2003–05, the FA used its authority to push for a simplified binary interpretation of the maps. Forests in Cambodia are classified as state property, so the NGO unwittingly facilitated government control over forest land and resources in the area through PES implementation.⁷ Second, by forcing the quantification of opportunity costs based on lost rice yields (as explained above) other non-monetary or difficult-to-quantify costs of stopping 'deforestation' were not considered. For example, the harvesting of non-rice products from shifting agriculture plots such as vegetables, fruit, fuelwood, common wildlife and grass for thatching were not accounted for, even though these benefits are significantly reduced under proposed sedentary 'agricultural intensification' scenarios. Furthermore, the agreements created a preoccupation among staff and villagers with the *amount* of benefit, rather than any deliberative consideration of its *form*. This limited the scope for communities to negotiate for non-material benefits, such as secure property rights.⁸ Thus, the PES model's focus on quantification and compensation distracted from the wider social, cultural and political issues at stake.

The final aspect of problem formulation that we wish to highlight was the conceptualization of land clearing as a collective problem. Following the community-level PES model, deforestation was assumed to be caused by all community members through their shifting agriculture activities, often referred to as 'slash and burn' in project documents. This assumption was underpinned by the discursive production of community as a single actor, which conveniently disguised the diversity of livelihoods and social inequalities within each commune. Thus, an un-nuanced and anti-political view of deforestation was readily adopted by project staff, who actively ignored questions about *who in particular* was involved in deforestation. This issue was highlighted during one agreement negotiation meeting, where certain committee members argued that it was unfair to force villagers to comply with PES contracts if powerful others in the commune were still allowed to cut forest. Committee members pleaded for help from the NGO to defend

7. At the time, only Khmer NGO staff were involved in PES implementation. They found it impossible to stand up to government demands, especially FA influence over the interpretation of land-use maps (Milne, 2009). Expatriate and head-office staff were initially unaware of these dynamics and their livelihoods implications, but when the first author drew attention to the issues, they did not respond.

8. The pursuit of property rights as a form of 'agreement benefit' is not precluded by the NGO, however. For example, the NGO's PES scheme in China explicitly focuses on the securing of communal forest property rights, with government support. Further research into this case is required.

their forest and land resources, but this was ignored. Instead, project staff said: ‘We are not talking about that today. . . we don’t care about who is cutting the forest, we just want to know how much was cut’.⁹ Thus, by focusing only on the need to calculate deforestation rates and corresponding payments at the commune level, project staff could ignore complicated struggles over land and forest resources within the community. The community-level PES model therefore enables conservationist-buyers to avoid having to acknowledge the micro-politics of resource exploitation, and in this case it even prevented community members from defending their resources.

Furthermore, the construction of deforestation as a community-level phenomenon ultimately means that the community, as service provider, must work out who is cutting forest and how to stop them. This means that the difficult work of addressing power relations in conservation is delegated to the community, and the conservationist-buyer is relieved of any responsibility for mediating social and political processes associated with delivering avoided deforestation services. When questioned about this, NGO staff saw little issue with ‘letting communities figure it out for themselves’, since this was considered the most ‘cost effective’ approach. The implication then is that community-level PES provides a convenient way to ‘outsource’ the politics of conservation, by reducing the complexities and struggles of natural resource management to an apolitical contract for services.

The Idea of Community Choice

Having illustrated the political and practical implications of the idea of community in this PES scheme, we now turn to the notion of ‘community choice’. The need for *voluntary* agreements is fundamental to PES, which relies on a willing buyer–willing seller economic model (Ferraro, 2001). In this view, communities act as willing sellers. This notion was enshrined in the NGO’s conservation agreement model, which stated that its ‘core idea’ was ‘to conserve biodiversity as a community choice’.¹⁰ At first glance this appears to be empowering for communities that act with self-interest, but our findings reveal otherwise.

As discussed, local villagers were required to enter PES contracts at the commune level so that they could become a ‘community’ capable of providing conservation services. This was achieved through the creation of local representative committees, alongside the engagement of government Commune Councils. These local organizations were dominated by a combination of traditional leaders, elites and party-political interests, in a culture of

9. Statement made by project staff during agreement negotiations in Arak commune, March 2007.

10. NGO document ‘Conservation Agreements: Model, Design and Implementation’ (2006).

patronage. Thus, problems arose when the NGO attempted to apply its Western notions of democratic choice and representation to the local context.

Indeed, our research revealed tremendous difficulties for villagers attempting to make collective choices in an equitable way. For example, during agreement negotiations, committees were asked to ensure that the rest of the commune population 'agreed' with the proposed conservation agreements, prior to signing. The NGO negotiator told committee members: 'you must go home and tell all the people, and make them understand [about the agreement]'. The committees were given two weeks to discuss the PES contracts informally with their relatives and neighbours, before reporting back to the NGO about any final issues. In Cambodia this was apparently acceptable, but the internal 'consensus-building' processes in each commune were not monitored by the NGO, and were therefore subject to local political dynamics and bias towards the interests of committee members. Thus, there was no formal or transparent public consultation or negotiation over the agreements; nor did community representatives seriously attempt to achieve consensus among the villagers they represented.

Therefore, it is not surprising that villager interviews revealed agreements were not understood as voluntary. Even some committee members said that they felt they had no alternative but to comply with the proposed conservation agreements. For example, one committee member explained that he wanted to cooperate with the NGO through the agreement so as 'to protect his people from handcuffs'.¹¹ This view emerges in household survey results from 2006, which showed that 33 per cent of households in Svay commune and 44 per cent in Trei thought that they would be 'arrested and fined' by the government if they broke the agreement, reflecting a perception of agreements as law, rather than a product of rational choice. When villagers were questioned about the origin of the agreements, it became clear that not everyone was aware of their 'choice'. Less than half of villagers understood the contract terms, and most said that the agreements came from 'high up' (*khan leu*), as though they were imposed government regulations. Furthermore, villagers generally did not know that there had been a 'negotiation process' (*kaachorcha*) prior to the implementation of the PES contracts. Thus, even if NGO implementation in this case was particularly weak, there seem to be grounds to question in principle the legitimacy of contractual or payments-based approaches to conservation at the community level.

The notion of 'community choice' is problematic not only because it is hard or even impossible to implement, but also because it disguises the subtle coercion of villagers and the homogenization of their views. As we have shown, this means that community-level PES has the potential to perpetuate or exacerbate local social inequalities. These findings should serve as a

11. This and subsequent quotes come from interviews with villagers and committee members in late 2007, unless otherwise stated.

warning to those involved in community-level REDD. That is, even if the NGO had employed state-of-the-art FPIC processes, now recommended for REDD (Brown et al., 2008), equitable outcomes would still have been hard to achieve given the artificial construction of 'community' and the overriding influence of local politics in villager decision making.

Moreover, the idea of community choice is essential to the 'market masquerade' that hides the interventionist nature of PES: by constructing villagers as willing and rational conservationists, the processes and responsibilities of 'government' are disguised. This tactic corresponds with the neoliberal strategy of 'governing through community' (Li, 2007; Rose, 1999). Rose (*ibid.*: 135) explains that this style of government or management emerged as 'regimes moved away from the idea that they had the responsibility or the capacity to define the good life and shape the citizenry according to an overall plan'. In such strategies, the task of government is therefore not to plan and control, but to 'enable and facilitate' community action (Li, 2007: 234). In this way, neoliberal interventions seek to harness and direct existing community dynamics, including a 'natural' inclination by individuals and groups to participate in markets and respond to economic incentives. This notion was fundamental to the community-level PES scheme in Cambodia. For example, a head-office advisor explained: 'It's up to the community to find the solution. . . we will build the project and people will build their own capacity as a response'. Thus, community-level PES aims to direct and enable 'community choice' for conservation purposes. This is the powerful essence of market-like initiatives in conservation: global intervention can be cloaked under notions of local people's choice and rational self-interest. In this neoliberal regime of free choice, however, only certain choices are available, and there is apparently no need for deliberative processes since the conservationist-buyer has already determined what problems are to be solved, and how. PES therefore introduces a new paradigm in community-based conservation, in which communities are seen as willing 'service providers' in market transactions, and bottom-up considerations of empowerment or rights are obscured.

The key problem here is that the idea of community choice again absolves conservationists from having to attend to the local social and political processes associated with what they do. Rather, communities are made responsible for their own internal processes, since they 'choose' to enter the agreements freely, as 'rational' market actors. This reveals how PES, through the application of market discourses and practices, enables conservationists to 'outsource' the politics of their actions, and avoid responsibility for the social consequences of the environmental services they procure. This anti-political process ultimately corresponds with that of commodification, whereby the social and political conditions of production are erased or 'factored out' through market exchange, or (as was the case here) through market-like transactions. This phenomenon is now emerging as a

fundamental yet multi-faceted feature of neoliberal conservation (e.g. Büscher, 2010; Kosoy and Corbera, 2010).

CONCLUSIONS

This article has focused on the political dimensions of a community-level PES scheme in Cambodia. We examined the powerful nature of the PES model in practice, especially the implications of operationalizing key concepts such as ‘community’ and ‘community choice’. Our findings show how these ideas can disguise and depoliticize intra-community dynamics, while eliminating the need for wider participatory or deliberative processes in conservation. Critically, as our case indicates, community decisions in this context may not be voluntary for all, and therefore the market-inspired idea of ‘community choice’ can deny local agency and silence certain voices.

In addition to community engagement issues, we explored how forest landscapes and environmental problems must be interpreted and framed to enable PES implementation, especially to make way for ‘avoided deforestation’ contracts. We showed how this process leads to simplified official views of ‘forest’ which render invisible property struggles and diverse land-use practices, and work to separate people from nature. This process has ultimately paved the way for more exploitative and capitalist nature–society relations in the project site: a scenario that is arguably a distinct side-effect of neoliberal conservation. Our contribution here is to have shown how this process operates in the case of community-level PES, while also demonstrating its very real implications for social justice, local power relations and property rights.

Finally, and more fundamentally, this contribution has revealed the interventionist and anti-political nature of community-level PES, and neoliberal conservation in general. In moving away from conventional assumptions that PES creates and enables environmental markets, we have instead revealed PES as a form of intervention that masquerades as a market, using market discourses and practices to shape human behaviour. We have shown how the market metaphor portrays communities as capable partners or service providers, and in turn enables conservationists to avoid project complexities on the ground by outsourcing decisions about *how* conservation is achieved, and *who* benefits in the process. The market masquerade therefore obscures or black boxes confronting and political questions about ‘the how’ of conservation, and reveals the essential anti-political nature of neoliberal conservation in practice.

REFERENCES

- Agrawal, A. and A. Angelsen (2009) 'Using Community Forest Management to Achieve REDD+ Goals' in A. Angelsen (ed.) *Realising REDD+: National Strategy and Policy Options*, pp. 201–211. Bogor: Centre for International Forestry Research.
- Agrawal, A. and C. Gibson (1999) 'Enchantment and Disenchantment: The Role of Community in Natural Resource Management', *World Development* 27(4): 629–49.
- Angelsen, A. (ed.) (2009) *Realising REDD+: National Strategy and Policy Options*. Bogor: Centre for International Forestry Research.
- Blaikie, P. (2006) 'Is Small Really Beautiful? Community-based Natural Resource Management in Malawi and Botswana', *World Development* 34(11): 1942–57.
- Blunt, P. and M. Turner (2005) 'Decentralisation, Democracy and Development in a Post-conflict Society: Commune Councils in Cambodia', *Public Administration and Development* 25: 75–87.
- Brockington, D. and R. Duffy (2010) 'Capitalism and Conservation: The Production and Reproduction of Biodiversity Conservation', *Antipode* 42(3): 469–84.
- Brosius, P. J. (1999) 'Green Dots, Pink Hearts: Displacing Politics from the Malaysian Rainforest', *American Anthropologist* 101(1): 36–57.
- Brosius, J. P. (2006) 'What Counts as Local Knowledge in Global Environmental Assessments and Conventions?', in W. Reid, F. Berkes, T. Wilbanks and D. Capistrano (eds) *Bridging Scales and Knowledge Systems: Concepts and Applications in Ecosystem Assessment*, pp. 129–44. Washington, DC: Island Press.
- Brosius, J. P., A. Tsing and C. Zerner (1998) 'Representing Communities: Histories and Politics of Community-based Natural Resource Management', *Society and Natural Resources* 11: 157–68.
- Brosius, J. P., A. Tsing and C. Zerner (eds) (2005) *Communities and Conservation: Histories and Politics of Community-based Natural Resource Management*. Walnut Creek, CA: Altamira Press.
- Brown, D., F. Seymore and L. Peskett (2008) 'How Do We Achieve REDD Co-benefits and Avoid Doing Harm?', in A. Angelsen (ed.) *Moving Ahead with REDD: Issues, Options and Implications*, pp. 107–118. Bogor: Centre for International Forestry Research.
- Bryant, R. (2002) 'Non-governmental Organisation and Governmentality: "Consuming" Biodiversity and Indigenous People in the Philippines', *Political Studies* 50: 268–92.
- Büscher, B. (2008) 'Conservation, Neoliberalism, and Social Science: A Critical Reflection on the SCB 2007 Annual Meeting in South Africa', *Conservation Biology* 22(2): 229–31.
- Büscher, B. (2010) 'Anti-politics as Political Strategy: Neoliberalism and Transfrontier Conservation in Southern Africa', *Development and Change* 41(1): 29–51.
- Büscher, B. (forthcoming) 'Payments for Ecosystem Services as Neoliberal Conservation: (Contrasting) Evidence from the Maloti-Drakensberg, South Africa', *Conservation and Society*.
- Castree, N. (2008) 'Neoliberalising Nature: Processes, Effects and Evaluations', *Environment and Planning A* 40: 153–73.
- Cleaver, F. (1999) 'Paradoxes of Participation: Questions of Participatory Approaches to Development', *Journal of International Development* 11: 597–612.
- Corson, C. (2010) 'Shifting Environmental Governance in a Neoliberal World: US AID for Conservation', *Antipode* 42(3): 576–602.
- Denzin, N. and Y. Lincoln (eds) (1998) *Collecting and Interpreting Qualitative Materials*. Thousand Oaks, CA and London: Sage.
- Dressler, W. and R. Roth (2011) 'The Good, the Bad, and the Contradictory: Neoliberal Conservation Governance in Rural Southeast Asia', *World Development* 39(5): 851–62.
- Ferguson, J. (1990) *The Anti-politics Machine: 'Development', Depoliticization, and Bureaucratic Power in Lesotho*. Cambridge: Cambridge University Press.
- Ferraro, P. (2001) 'Global Habitat Protection: Limitations of Development Interventions and a Role for Conservation Performance Payments', *Conservation Biology* 15(4): 990–1000.

- Ferraro, P. and A. Kiss (2002) 'Direct Payments to Conserve Biodiversity', *Science* 298: 1718–19.
- Foucault, M. (1979) 'On Governmentality', *Ideology and Consciousness* 6: 5–22.
- Heynen, N., J. McCarthy, S. Prudham and P. Robbins (eds) (2007) *Neoliberal Environments: False Promises and Unnatural Consequences*. London and New York: Routledge.
- Hirsch, P., W. Adams, J. P. Brosius, A. Zia, N. Bariola and J. Dammert (2011) 'Acknowledging Conservation Trade-offs and Embracing Complexity', *Conservation Biology* 25(2): 259–64.
- Hutton, J., W. Adams and J. Murombedzi (2005) 'Back to Barriers? Changing Narratives in Biodiversity Conservation', *Forum for Development Studies* 32(2): 341–70.
- Igoe, J. and D. Brockington (2007) 'Neoliberal Conservation: A Brief Introduction', *Conservation and Society* 5(4): 432–49.
- Kosoy, N. and E. Corbera (2010) 'Payments for Ecosystem Services as Commodity Fetishism', *Ecological Economics* 69(6): 1228–36.
- Ledgerwood, J. and J. Vijghen (2002) 'Decision-making in Rural Khmer Villages', in J. Ledgerwood (ed.) *Cambodia Emerges from the Past: Eight Essays*, pp. 109–50. DeKalb, IL: Northern Illinois University, Center for Southeast Asian Studies.
- Li, T. (2002) 'Engaging Simplifications: Community-based Resource Management, Market Processes and State Agendas in Upland Southeast Asia', *World Development* 30(2): 265–83.
- Li, T. (2007) *The Will to Improve: Governmentality, Development and the Practice of Politics*. Durham, NC and London: Duke University Press.
- Madeira, E.M. (2009) 'REDD in Design: Assessment of Planned First Generation Activities in Indonesia'. Discussion Paper 09–49. Washington, DC: Resources for the Future.
- Martin, M. (1997) *Les Khmers Daeum, 'Khmers de l'origine': Société montagnarde et exploitation de la forêt, de l'écologie à l'histoire [The Original Khmers: Mountain Society and Forest Use, from Ecology to History]*. Paris: Presses de l'École française d'Extrême-Orient.
- McAfee, K. and E. Shapiro (2010) 'Payments for Ecosystem Services in Mexico: Nature, Neoliberalism, Social Movements, and the State', *Annals of the Association of American Geographers* 100(3): 579–99.
- McCarthy, J. and S. Prudham (2004) 'Neoliberal Nature and the Nature of Neoliberalism', *Geoforum* 35(3): 275–83.
- McElwee, P. (2011) 'Payments for Environmental Services as Neoliberal Market-based Forest Conservation in Vietnam: Panacea or Problem?', *Geoforum* (in press) doi:10.1016/j.geoforum.2011.04.010.
- McGregor, A. (2010) 'Green and REDD? Towards a Political Ecology of Deforestation in Aceh, Indonesia', *Human Geography* 3(2): 21–34.
- Menzel, S. and J. Teng (2009) 'Ecosystem Services as a Stakeholder-driven Concept for Conservation Science', *Conservation Biology* 24: 907–09.
- Milne, S. (2009) 'Global Ideas, Local Realities: The Political Ecology of Payments for Biodiversity Conservation Services in Cambodia'. PhD dissertation, Department of Geography, University of Cambridge.
- Milne, S. and E. Niesten (2009) 'Direct Payments for Biodiversity Conservation in Developing Countries: Practical Insights for Design and Implementation', *Oryx* 43(4): 530–41.
- Mosse, D. (2004) 'Is Good Policy Unimplementable? Reflections on the Ethnography of Aid Policy and Practice', *Development and Change* 35(4): 639–71.
- Mosse, D. (2005) *Cultivating Development: An Ethnography of Aid Policy and Practice*. London: Pluto Press.
- Muradian, R., E. Corbera, U. Pascual, N. Kosoy and P. May (2010) 'Reconciling Theory and Practice: An Alternative Conceptual Framework for Understanding Payments for Environmental Services', *Ecological Economics* 69(6): 1202–08.
- Naidoo, R. et al. (2008) 'Global Mapping of Ecosystem Services and Conservation Priorities', *Proceedings of the National Academy of Sciences USA* 105: 9495–9500.

- Nature* (2009) 'Natural Value: The Economic Downturn might be the Best Time to Include Ecosystem Services in the Real Economy', *Nature* 457: 764.
- Nelson, F. et al. (2009) 'Payments for Ecosystem Services as a Framework for Community-based Conservation in Northern Tanzania', *Conservation Biology* 24: 78–85.
- Öjendal, J. and K. Sedara (2006) '*Korob, kaud, klach*: In Search of Agency in Rural Cambodia', *Journal of Southeast Asian Studies* 37(3): 507–26.
- Phelps, J., E. Webb and A. Agrawal (2010) 'Does REDD+ Threaten to Recentralize Forest Governance?', *Science* 328(5976): 312–13.
- Quarles van Ufford, P. (1993) 'Knowledge and Ignorance in the Practices of Development Policy', in M. Hobart (ed.) *An Anthropological Critique of Development: The Growth of Ignorance*, pp. 135–60. London: Routledge.
- Redford, K. and W. Adams (2009) 'Payment for Ecosystem Services and the Challenge of Saving Nature', *Conservation Biology* 23(4): 785–87.
- Robertson, M. (2004) 'The Neoliberalization of Ecosystem Services: Wetland Mitigation Banking and the Problems in Environmental Governance', *Geoforum* 35(3): 361–73.
- Robertson, M. (2006) 'The Nature that Capital Can See: Science, State, and Market in the Commodification of Ecosystem Services', *Environment and Planning D: Society and Space* 24(3): 367–87.
- Rock, F. (2001) 'Participatory Land Use Planning (PLUP) in Rural Cambodia: Manual for Government Staff and Development Workers'. Phnom Penh: Ministry of Land Management, Urban Planning and Construction.
- Romero, C. and G. Andrade (2004) 'ICO Approaches to Tropical Forest Conservation: Response to Rice and Nieston (Letter)', *Conservation Biology* 18(6): 1454–55.
- Rose, N. (1999) *Powers of Freedom: Reframing Political Thought*. Cambridge: Cambridge University Press.
- Samuelson, P. (1948) 'Consumption Theory in Terms of Revealed Preference', *Economica* 15(60): 243–53.
- Sandbrook, C., F. Nelseon, W. Adams and A. Agrawal (2010) 'Carbon, Forests and the REDD Paradox', *Oryx* 44(3): 330–34.
- Scott, J. (1998) *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press.
- Shore, C. and S. Wright (eds) (1997) *Anthropology of Policy: Critical Perspectives on Governance and Power*. London and New York: Routledge.
- Sommerville, M., E. Milner-Gulland, M. Rahajaharison and J. Jones (2010) 'Impact of Community-based Payment for Environmental Services Intervention on Forest Use in Menabe, Madagascar', *Conservation Biology* 24(6): 1488–98.
- Sukhdev, P. (2009) 'Costing the Earth', *Science* 462: 277.
- Wunder, S. (2005) 'Payment for Environmental Services: Some Nuts and Bolts'. Occasional Paper No.42. Bogor: Centre for International Forestry Research.
- Wunder, S. (2008) 'Payments for Environmental Services and the Poor: Concepts and Preliminary Evidence', *Environment and Development Economics* 13(03): 279–97.

Sarah Milne (sarah.milne@anu.edu.au) is a Postdoctoral Fellow with the Resource Management Asia-Pacific Program (RMAP), Crawford School of Economics and Government, Australian National University. Her research explores the politics of transnational biodiversity conservation and forest carbon initiatives, especially in Cambodia, where she has been involved in community-based conservation efforts since 2002.

Bill Adams (bill.adams@geog.cam.ac.uk) is the Moran Professor of Conservation and Development at the Department of Geography, University of Cambridge. He is currently researching the institutional politics of landscape-scale conservation in Africa and the UK.