



Policy options to reduce deforestation

Arild Angelsen

- Four types of policies could reduce deforestation: policies to depress agricultural rent, policies to increase and capture forest rent, policies that directly regulate land use, and cross-sector policies that underpin the first three.
- While payments for environmental services (PES) have clear advantages, in the early stages of REDD+ implementation, broader policies which address underlying causes are more feasible and likely to be more successful.
- REDD+ is a new direction in forest conservation. This means that countries need to take into account research on deforestation, and lessons learned from previous forest conservation policies, when developing national REDD+ strategies.

Introduction

A key feature of REDD+ provides incentives and compensation to forest managers (carbon rights holders) to reduce deforestation through payments for environmental services (PES). However, full-scale implementation of a PES system faces a number of obstacles: unclear and contested land rights,

inadequate monitoring, reporting and validation (MRV), inadequate administrative capacity, poor governance, corruption, and so on. Since reducing emissions from deforestation (RED) was launched at COP-11 in 2005, it has become increasingly clear that to successfully implement REDD+, governments need to put in place a broad set of policies that go well beyond PES.

The first step in designing and implementing forest conservation policies is to understand the causes of deforestation. This chapter analyses deforestation in the framework of the von Thünen land rent model that assumes that people use land in a way that brings them the highest land rent (surplus). Farmers, companies and other land users deforest land because non-forest uses such as agriculture, is more profitable (has a higher rent) than using the land for forests.

Within the land rent framework four sets of policies could reduce deforestation: policies to bring down agricultural rents at the forest frontier; policies to boost and capture forest rents; policies that directly regulate land use (for example, that protect forest and regulate land use planning); and cross-cutting policies, such as good governance and decentralisation. This chapter gives a broad overview of these policies in the framework of the land rent model. Several of the policy options are discussed further in subsequent chapters.

Frameworks for understanding deforestation

Hierarchy of causes

One framework for understanding deforestation distinguishes between causes at different levels, as shown in Figure 10.1 (Angelsen and Kaimowitz 1999). At one level are the *sources* of deforestation, i.e., the agents (individuals, households or companies) responsible for clearing the forest.¹ The main agents of deforestation are subsistence farmers practising shifting cultivation, cash crop smallholders and large companies that clear land for crops and cattle. Together, these account for three-quarters of all tropical deforestation (IPCC 2007).

At another level are the prices, access to markets, agricultural technologies, agro-ecological conditions and so on that influence the choices made by these agents of deforestation. These decision parameters constitute the *immediate or direct causes* of deforestation. At a third level, these decision parameters are in turn affected by broader national and international policies,² the *underlying causes* of deforestation.

1 The terms used in the literature are far from uniform. 'Proximate causes' is sometimes used for the immediate or direct causes, while the term 'drivers' is used for both agents and underlying causes.

2 For the sake of simplicity, Figure 10.1 implies that causal effects flow in only one direction. But important effects also flow in the opposite direction. For example, agents will make decisions that have important feedback effects on market prices (general equilibrium effects). Agents' collective actions, political pressure and demographic behaviour also affect underlying causes.

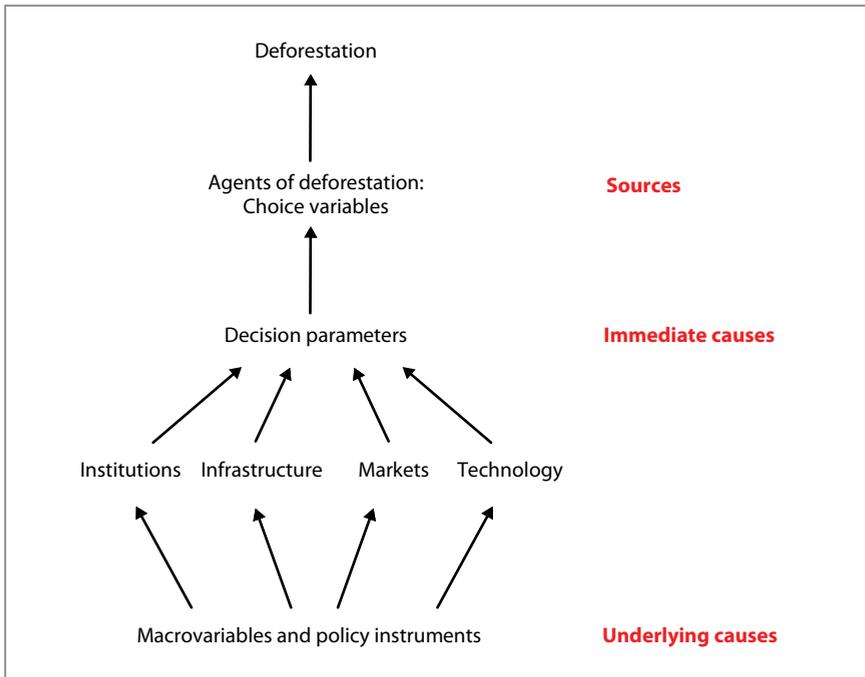


Figure 10.1. Sources, immediate causes and underlying causes of deforestation

Source: Angelsen and Kaimowitz (1999)

In this framework, policies to reduce deforestation would address the decision parameters by restructuring markets, disseminating new technologies and information, and developing infrastructure and institutions. These policies would change the way agents use land. The next section analyses these policies in the framework of the von Thünen land rent model.

Land rent (von Thünen model)

The economics of land use assume that *land is allocated to the use with the highest land rent* (surplus or profit). A number of factors, many directly or indirectly dependent on location, such as crop prices, labour costs and accessibility, determine the rent for different land uses. A key aspect of location is remoteness, as measured by the distance to markets or cities. The von Thünen model shows how land rent – as determined by distance from a commercial centre (markets) – shapes land use.

The von Thünen model is a key to understanding deforestation (Box 10.1). When applied to two land uses, agriculture and forest, the model shows that anything that makes agriculture more profitable stimulates deforestation. Anything that makes forests more profitable (brings higher forest rent) has the opposite effect. Calculating the forest rent is, however, more complicated than calculating the agricultural rent because property rights are often unclear

Box 10.1. The land rent model from von Thünen

Farmers, companies and other land users deforest because nonforest uses are more profitable (i.e., have a higher rent) than forest uses. A key determinant of land rents is location, most typically measured by the distance to markets or cities. This is the approach proposed by Johann von Thünen in 1826 (von Thünen 1966), when he asked: 'Under these conditions what kind of agriculture will develop and how will the distance to the city affect the use of land if this is chosen with the utmost rationality?'

As an analytical simplification, consider a model where land has only two uses, agriculture and forest (Angelsen 2007). First, we can define the land rent as:

$$r_a = p_a y_a - w l_a - q k_a - v_a d$$

Agricultural production per ha (yield) is given (y_a). Output is sold in a central market at a given price (p_a). The labour (l_a) and capital (k_a) required per ha are fixed, with input prices being the wage (w) and annual costs of capital (q). Transportation costs are the product of costs per km (v_a) and distance from the centre (d). The rent declines with distance, and the agricultural frontier is where agricultural expansion is no longer profitable, i.e., where $r_a = 0$.

Thus, the frontier is defined at:

$$d = \frac{p_a y_a - w l_a - q k_a}{v_a}$$

This model is illustrated in Figure 10.2 and yields several key insights into the *immediate causes* of deforestation. If we ignore forest rent, deforestation will take place up to the distance A. Higher output prices, and technologies that increase yields or reduce input costs, make expansion more attractive, i.e., they move the agricultural rent curve to the right. Lower costs of capital in the form of better access to credit and lower interest rates pull in the same direction. Higher wages work in the opposite direction. Reduced access costs (v_a), for example, new or better roads, also provide a stimulus for deforestation. A survey of more than 140 economic models of deforestation finds a broad consensus on three immediate causes of deforestation; higher agricultural prices, more and better roads and low wages coupled with a shortage of off-farm employment opportunities (Angelsen and Kaimowitz 1999; Kaimowitz and Angelsen 1998).

Forest rent can be defined as:

$$r_f = (p_i y_i - w l_i - q k_i - v_i d) + p_i y_i + p_g y_g$$

We distinguish between three types of rent. First, there is *extractive* forest rent for forest products, such as timber and non-timber forest products. This is similar to agricultural rent and expressed within the brackets. Second, there is *local protective* forest rent ($p_i y_i$), which is the local public goods that standing forests provide, such as water catchment and pollination services. Third, there is *global protective* forest rent ($p_g y_g$), which is the provision of global public goods, such as carbon sequestration and storage, and maintaining biodiversity.

Forest rent is not necessarily taken into account by agents of deforestation. In open access situations, without any *de facto* property rights to forests, no forest rent will be taken into account. (Point A in Figure 10.2). In a system with private property, the extractive forest rent is incorporated (Point B). Community forest management (CFM) should, in principle, include the local protective forest rent (Point C). If local land users also receive payments for environmental services (PES), and capture global protective forest rent, this combination could reduce deforestation even further (Point D).

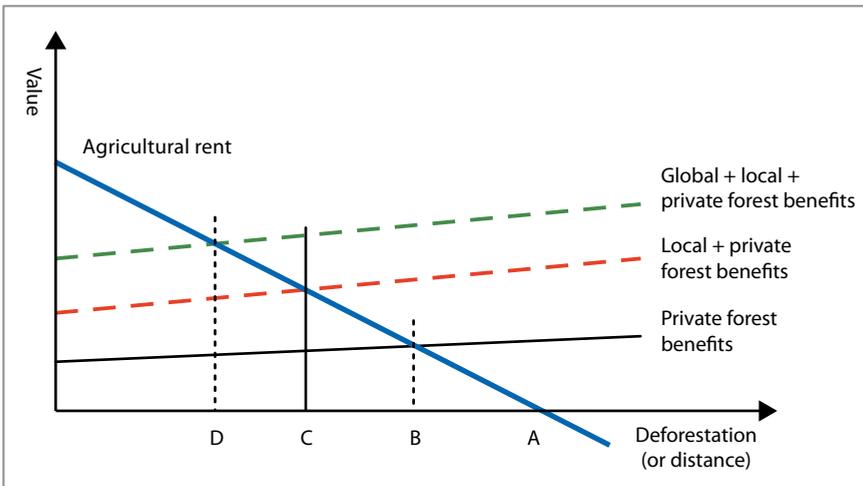


Figure 10.2. Agricultural and forest rents

and because key elements of the forest rent, such as environmental services (including carbon sequestration and storage) provided by forests, are considered public goods. Thus when making decisions about forest conversion, it is more important to explore how the forest rent should be captured by land users than it is to determine the actual forest rent.

Agricultural policies to reduce deforestation

Reduce agricultural rent

Understanding agricultural rent is critical to understanding deforestation rates. Keeping agricultural rents low can be very effective in saving forests. This has been called ‘the “improved Gabonese recipe” for forest conservation’ (Wunder 2003). The main ingredients of this recipe are heavy taxes on export crops and neglect of rural roads and support to smallholders. Such policies run counter to mainstream policy recommendations for agricultural and rural development (World Bank 2007), and conflict with the objectives of reducing poverty and increasing agricultural production. They are blunt policy instruments with perverse side effects (Kaimowitz *et al.* 1998). They also are likely to be politically controversial, although for decades policies have had a strong bias against rural development and agriculture in many poor countries in an attempt to keep urban food prices low (Krueger *et al.* 1988).

Agricultural rent can be lowered by raising the opportunity cost of labour (better employment opportunities off-farm). Forest cover in a country might, over time, go through forest transition (see Box 1.2). Better off-farm wages, and employment opportunities that pull labour out of agriculture, can be major drivers of a transition to stable forest cover and are often referred to as ‘the economic development path’ (Rudel *et al.* 2005). Economic development is, however, not a policy instrument, but the aggregate outcome of, amongst other things, a basket of policies. Targeted policies can stimulate nonfarm employment in rural areas, but they do not guarantee forest conservation. Although higher nonagricultural incomes will tend to pull labour out of extensive agriculture, the higher wages earned might be invested in ventures that deplete forests, such as cattle ranching (Vosti *et al.* 2001). Win-win outcomes seem more likely in labour-intensive than in capital-intensive agricultural systems (Angelsen and Kaimowitz 2001). In the latter, any stimulus to the local economy will help relax capital constraints that currently slow otherwise profitable agricultural expansion.

Support intensive agriculture and technological change

An important extension of the von Thünen model distinguishes between intensive (lowland) and extensive (upland or frontier) agriculture, where ‘intensive’ is understood to mean intensive in productive inputs other than

land. Spatially targeted policies to stimulate intensive agriculture can be an effective forest conservation policy. The logic is similar to that for off-farm employment. By making the alternatives to extensive agriculture more attractive, labour is pulled out of deforesting activities. For example, better small-scale irrigation systems in the Philippines pushed up demand for labour, boosted wages and pulled labour out of extensive agriculture. More and better paid jobs in lowland agriculture nearly halved the rate of upland forest clearance (Shively 2001; Shively and Pagiola 2004). Adding to this, higher productivity in the intensive sector can push domestic agricultural prices down, further reducing the agricultural rent of extensive agriculture and thereby deforestation rates (Jayasuriya 2001).

Policies to intensify agriculture in specific areas are discussed in depth by Rudel in Chapter 15 under a new term: reduced emissions agricultural policy (REAP). They include credit programmes, subsidised fertilisers and seeds, assistance in marketing and agricultural extension programmes.

Although these policies might reduce deforestation, there is no guarantee. If the main crop is traded internationally, an increase in supply may only have a small effect on the price that farmers get for their produce. If policies save labour or encourage technological change, the pull effect on labour may be weak or even negative (Angelsen and Kaimowitz 2001). In addition, higher profits in intensive agriculture could be invested in clearing more forest for extensive crops and cattle production. This happened in Sulawesi, Indonesia, in the 1990s. Mechanisation of lowland rice freed up labour and produced more rice, and the profits were used to expand cocoa cultivation in forested uplands (Ruf 2001).

Ignore extensive agriculture?

Policies stimulating intensive agriculture in certain areas might ignore agriculture in remote forest areas where poverty rates are typically higher (Sunderlin *et al.* 2008b). Is it possible to raise productivity, boost output prices by improving access to markets, and support extensive agriculture without increasing deforestation? A summary of more than a dozen studies on the effect of technological changes on tropical deforestation (Angelsen and Kaimowitz 2001) concluded that 'tradeoffs and win-lose between forest conservation and technological progress in agriculture in areas near forests appear to be the rule rather than the exception'.

Certain technologies and market conditions may produce win-win outcomes. New labour-intensive or capital-intensive technologies could slow rates of deforestation and increase profits. Most farmers have labour or capital constraints and could be expected to adopt technologies that save labour or

Table 10.1. Policies to reduce deforestation

Policy	Effectiveness of forest conservation	Direct costs of policy (efficiency)	Effect on inequality or poverty	Political viability
1. Reduce (extensive) agriculture rent				
Depress agricultural prices	High	Negative	Negative	Low
Create off-farm opportunities	High	Medium – high	Neutral – positive	High
Support intensive agricultural sector	Moderate – high	High	Uncertain	High
Selectively support extensive agriculture	Uncertain – moderate	High	Positive	Moderate
Ignore extensive road building	High	Negative	Negative	Low – moderate
Secure property rights	Uncertain	Medium	Uncertain	Moderate – high
2. Increase forest rent and its capture				
Higher prices for forest products	Moderate	Low	Positive – uncertain	Moderate
CFM – capture local public goods	Moderate	Low – medium	Positive	Moderate
PES – capture global public goods	Potentially high	Medium – high	Uncertain – positive	Moderate – high
3. Protected areas				
	Moderate – high	Medium	Uncertain	Moderate
4. Cross cutting policies				
Good governance	Low – moderate direct effects	Low or even negative	Positive	High
Decentralisation	Low – moderate direct effects	Low – medium	Positive	High

capital. But, with some important exceptions, we are *not* likely to get the kind of technological change that would save the forests (Angelsen and Kaimowitz 2001). For example, it is technically possible to make more intensive use of pastures throughout Latin America, but farmers typically do not do this until there is no more forest to be cleared (Kaimowitz and Angelsen 2008). This confirms Boserup's (1965) hypothesis that farmers will exploit the extensive margin before they exploit the intensive one.

A more likely win-win way to help farmers in remote areas would be in situations where they are involved in both intensive and extensive production systems side by side, and the extensive system being the principal source of deforestation. In Zambia, high-yielding maize varieties introduced in the 1970s lessened the need for extensive shifting cultivation and slowed down deforestation (Holden 2001). Similarly, more recent and widely adopted programmes on 'conservation agriculture' in the country have the potential to reduce the pressure on natural forests (Ibrekk and Studsrød 2009).

Roads

Constructing new roads or improving existing ones opens up new areas, brings down transport costs, makes markets more accessible and makes deforesting activities more profitable. In general, improving roads and infrastructure is a main cause of deforestation. This led Eneas Salati, a respected Brazilian scientist, to conclude, 'The best thing you could do for the Amazon is to bomb all the roads' (cited in Laurance 2009).

Roads are particularly important in the early stages of forest transition as they open up new areas (Weinhold and Reis 2008). In later stages, in a best-case scenario, roads encourage agricultural intensification and economic development that lessen pressure on forests, and provide incentives (such as opportunities for tourism) to manage forests better and the means to do so, namely better access. Further, the role of the state in building roads, and in other large-scale undertakings such as colonisation programmes, has weakened since the 1980s (Rudel 2007). Still, no forest conservation policy can be considered comprehensive unless it provides clear guidelines on transport infrastructure.

Reform tenure

An analysis of the effects of property rights (to agricultural land) on deforestation must distinguish between exogenous and endogenous tenure (Angelsen 2007). If exogenous, the question is, What is the impact of insecure tenure on deforestation? If endogenous, the question is, How do the actions of land users to secure tenure affect deforestation?

The effect of *exogenous* tenure insecurity on deforestation in an extended von Thünen model is straightforward: a land user will invest by clearing more forest and converting it to agriculture (Angelsen 1999; Araujo *et al.* 2009). This is the opposite of what is commonly assumed. Insecure tenure should slow deforestation whereas more secure tenure should increase the value of the investment and encourage forest clearing. Forest protection is, from a societal perspective, an investment for the future. In contrast, from the individual's point of view, deforestation is an investment in future income.

As usual, the reality is more complex. For example, in a shifting cultivation system, security of tenure varies depending on the stage in the cultivation cycle. Farmers may have fairly secure tenure over plots they are currently cultivating, but weak tenure for fallow plots. The longer the plot has been fallow the less secure the tenure, which may lead to inefficient, short fallows (Goldstein and Udry 2008). Moreover, insecure tenure means farmers invest less in the land and exhaust the soil more quickly which, increasing in turn the need or the incentives to cut down more forest to replace degraded land. This is the 'land degradation-deforestation hypothesis' (Angelsen and Kaimowitz 2001), but is only valid under certain assumptions about behaviour and markets (Angelsen 1999).

The effect of *endogenous* tenure is that land users act to make tenure more secure. Forest conversion, according to both customary and statutory law, often establishes or strengthens existing land rights. Deforestation therefore becomes a way to establish title. This could lead to a 'land race' or 'race to the frontier', where forest is cleared in order to establish property rights. This is particularly the case in the Amazon, where clearing strengthens claims by landowners and squatters in conflict (Araujo *et al.* 2009).

Policies to increase and capture forest rent

Increasing forest rent over time is the second way to protect them: 'the forest scarcity path' of the forest transition (Rudel *et al.* 2005). High demand and a limited supply of forest products stimulate stabilisation of forest cover and regrowth. Policies can influence forest rent in similar ways to agricultural rent, e.g., through taxes and marketing arrangements that affect the prices of timber and other forest products, or by promoting new technologies. While historically this path has been driven by forest extractive rent (rent from forest products), the fundamental idea of REDD+ is to stimulate forest cover stabilisation through an increase in the protective rent (rent from environmental services). An increase in forest rent, however, will not affect deforestation unless land users can capture a share (and include it in deciding how to use land). There are two main ways of 'internalising the externalities' for optimal forest use: by moving decisions to a greater scale

at which the effects are occurring and therefore can be incorporated, and by creating a market for the public good (i.e., environmental services provided by standing forests).

Large tracts of tropical forests are characterised by weak, unclear and contested property rights, making them *de facto* open access (Sunderlin *et al.* 2008a, see also Chapter 11). In these areas land users have no economic incentive to factor forest rent into their decisions about forest conversion. A higher extractive forest rent will not, in itself, affect agricultural expansion. But, better infrastructure and roads lead to more logging, and often logging and expansion of agricultural land go together (Geist and Lambin 2002). If we also consider forest degradation, higher timber prices might lead both to more intensive logging in production forests and to an expansion of the area being logged (Amsberg 1998).

In a context of private property rights to the forest land, a higher forest extractive rent implies more forest will remain (Figure 10.2). But if we take degradation and changes in overall forest carbon stocks into account, the effects are more complicated. In general, higher timber prices will shorten the rotation period and therefore reduce the average carbon stock.

Assigning individual property rights to forest is often put forward as a solution to excessive deforestation. Individual property rights alone will not solve the problem of local and global externalities, but clear and secure property rights, either at the individual or the community level, are a necessary to establish PES systems. They will also encourage more sustainable management of forests compared with an open access regime, with positive effects on degradation and carbon emissions.

Community forest management (CFM) moves decisions from the individual to the community to compensate for negative externalities from deforestation (C in Figure 10.2). The success of CFM depends on the ability of the community 1) to make decisions that take account of externalities, and 2) to enforce the rules effectively among members and to exclude outsiders. Chapter 16 reviews experiences with CFM, and the lessons that need to be carried forward into the REDD+ debate.

The key proposal in the REDD+ debate is to create a multilevel (global–national–local) PES system for carbon sequestration and carbon storage in forests (Angelsen 2008b). The PES experiences and challenges are reviewed in Chapter 17. PES systems assume that tenure, MRV, administrative capacity, governance, corruption and so on have been addressed. But in most deforestation hotspots, land rights are unclear, overlapping and contested. This means that it will be more difficult to use PES as the main instrument

to achieve REDD+ than policy makers commonly assume. In the short to medium term, national REDD+ strategies will have to rely heavily on policies other than PES.

Protected areas (PAs)

Forest protected areas (PAs) in IUCN categories 1 to 6 make up 13.5% of the world's forests (Schmitt *et al.* 2009), the share being significantly higher (20.8%) in rainforests. Chapter 18 reviews experiences with PAs and integrated conservation and development programmes (ICDPs) and their effectiveness. A key question is whether PAs do in fact protect forest. There is broad consensus in the literature that the degree of protection is not 100%, but that rates of deforestation within PAs are lower than outside. This is still true after controlling for 'passive protection', that is, allowing for the fact that PAs are often located in remote areas with less pressure on forest (Bruner *et al.* 2001; DeFries *et al.* 2005). Recent studies also attempt to estimate spillovers or 'neighbourhood leakage', i.e., where deforestation activities shift from inside to outside the PAs. Studies from Costa Rica (Andam *et al.* 2008) and Sumatra (Gaveau *et al.* 2009) find these effects to be small, and not easy to detect (See Box 22.2).

Studies have also shown significantly less deforestation in various types of protected areas in the Amazon (parks, indigenous lands, extractive reserves and national forests). Indigenous lands account for one-fifth of the Brazilian Amazon. Nepstad *et al.* (2006) find the inhibitory effect (the deforestation ratio between 10 km wide strips of land outside and inside the PA border) for the period between 1997 and 2000 to be 8.2. These and other results reviewed by the World Bank suggest that 'protected areas may be more effective than is commonly thought' (Chomitz *et al.* 2007).

Cross-sector policies

Poor governance, including corruption, affects forest conservation in several ways, as discussed in Chapter 13. Corruption at high political level, often called 'grand corruption', directly affects the design of policies. Timber politics in South Asia involve not only rent seeking, but also rent creating, i.e., actively manipulating the rules to generate benefits for powerful groups (Ross 2001). The land use planning process is potentially a strong tool for forest conservation, but is also susceptible to manipulation by dominant individuals and groups (Chapter 13).

Corruption will, in general, weaken policies seeking to conserve forests. Petty corruption abounds in the forestry sector in the form of bribing local officials to ignore violations of forest regulations, harvesting timber without legal

permits (Smith *et al.* 2003a) and harvesting outside concession boundaries (Friends of the Earth 2009). But corruption may in some cases also slow deforestation and degradation, for example, bribes to allow illegal harvesting could be a deterrent 'tax' which makes harvesting less profitable and so reduce harvesting rates.

Similarly, decentralisation of forest governance, discussed at length in Chapter 14, is not a straightforward recipe for reducing deforestation and forest degradation. Some decentralisation reforms have had positive results on deforestation while others have had the opposite effect. Decentralisation, like CFM, could help deal with the negative local externalities of deforestation and degradation, and encourage more forest conservation. But, it is often the extractive activities (logging) that boost local incomes, thus outcomes can be mixed.

Decentralisation may be a way to implement other REDD+ policies more effectively, efficiently and equitably. By 'bringing the state closer to the people', decentralisation can increase local participation and build social capital (World Bank 1997). However, as concluded in Chapter 14, forestry decentralisation has in the past often been weakly or partially implemented, and under inequitable rules of participation and power sharing, although REDD+ has the potential to change this.

Selecting policies

Research on the underlying causes of deforestation (UCD) in the past 25 years has found that broad societal forces and nonforestry policies play a critical role (Kanninen *et al.* 2007). Thus, much of the focus has been on the causes shown in the lower half of Figure 10.1. The REDD+ debate so far has taken a different approach, namely to provide direct incentives and compensation to the actors (i.e., a PES or PES-like approach). The focus has shifted to the upper part of Figure 10.1.

There are several advantages in a PES-like approach. In general, targeting a problem directly is the most effective and efficient option. This also makes sure that those who lose out from forest conservation will be compensated for the opportunity costs. PES-like systems are also less likely to conflict with other policy goals.

But, as noted in this chapter and elsewhere in this book (particularly Chapter 17), there are a number of challenges in establishing PES systems. This means that direct payments to farmers and other forest users are unlikely to become the main REDD+ policy in the short to medium term in most countries. REDD+ policy makers should, therefore, think broadly and look

beyond the forestry sector. Some of the policies reviewed in this book can be very effective. They can also be relatively low cost, or in some cases even have negative costs such as when subsidies that encourage deforestation and degradation are removed.

Countries developing their REDD+ strategies should, therefore, consider a wide range of policies and take national circumstances into account. These include the particular agents and causes of deforestation, the stage in the forest transition, administrative capacity and previous experience with forest conservation policies. REDD+, with its strong emphasis on payment for performance, is in many ways a new game in town, at least at the national level. Yet, there is a significant risk that valuable lessons from previous policy interventions and from research on the causes of deforestation will be overlooked when designing REDD+ strategies and policies.

References

- Adeney, J. M., Christensen Jr, N. L. and Pimm, S. L. 2009 Reserves protect against deforestation fires in the Amazon. *PLoS ONE* 4(4): e5014.
- Agrawal, A. 2001 Common property institutions and sustainable governance of resources. *World Development* 29(10): 1649-1672.
- Agrawal, A. 2005 *Environmentality*. Duke University Press, Raleigh, NC, USA. 344p.
- Agrawal, A. 2007 Forests, governance, and sustainability: common property theory and its contributions. *International Journal of the Commons* 1(1): 51-76.
- Agrawal, A., Chhatre, A. and Hardin, R. 2008 Changing governance of the world's forests. *Science* 320(5882): 1460-1462.
- Agrawal, A. and Gibson, C. C. 1999 Enchantment and disenchantment: the role of community in natural resource conservation. *World Development* 27(4): 629-649.
- Agrawal, A. and Goyal, S. 2001 Group size and collective action: third-party monitoring in common-pool resources. *Comparative Political Studies* 34(1): 63-93.

- Agrawal, A. and Ostrom, E. 2001 Collective action, property rights, and decentralization in resource use in India and Nepal. *Politics and Society* 29(4): 485-514.
- Agrawal, A. and Redford, K. 2009 Conservation and displacement: an overview. *Conservation and Society* 7(1): 1-10.
- Ählström, J. and Sjöström, E. 2005 CSOs and business partnerships: strategies for interaction. *Business Strategy and the Environment* 14(4): 230-240.
- Alencar, A., Nepstad, D. and Vera-Diaz, M. C. 2006 Forest understory fire in the Brazilian Amazon in ENSO and non-ENSO years: area burned and committed carbon emissions. *Earth Interactions* 10 (Paper No. 6).
- Alencar, A., Solorzano, L. and Nepstad, D. C. 2004 Modeling forest understory fires in an eastern Amazonian landscape. *Ecological Application* 14(4): 139-149.
- Alston, L., Libecap, G. and Mueller, B. 1999 Titles, conflict, and land use: the development of property rights and land reform on the Brazilian Amazon frontier. University of Michigan Press, Ann Arbor, MI, USA.
- Alvarado, L. X. R. and Wertz-Kanounnikoff, S. 2007 Why are we seeing 'REDD'? An analysis of the international debate on reducing emissions from deforestation and degradation in developing countries. *Analyses*. Institut du développement durable et des relations internationales, Paris. 28p.
- Amsberg, J. V. 1998 Economic parameters of deforestation. *World Bank Economic Review* 12(1): 133-153.
- Anaya, S. J. and Grossman, C. 2002 The case of *Awas Tingni v. Nicaragua*: a new step in the international law of indigenous peoples. *Arizona Journal of International and Comparative Law* 19(1): 1-15.
- Andam, K. S., Ferraro, P. J. and Holland, M. B. 2009 What are the social impacts of land use restrictions on local communities? Empirical evidence from Costa Rica. Paper contributed to the Conference of the International Association of Agricultural Economists. Beijing, China, 16-22 August 2009.
- Andam, K. S., Ferraro, P. J., Pfaff, A., Sanchez-Azofeifa, G. A. and Robalino, J. A. 2008 Measuring the effectiveness of protected area networks in reducing deforestation. *Proceedings of the National Academy of Sciences* 105(42): 16089-16094.
- Anderson, K. 2009 Distorted agricultural incentives and economic development: Asia's experience. *World Economy* 32(3): 351-384.
- Andersson, K. P. and Gibson, C. C. 2004 Decentralization reforms: help or hindrance to forest conservation? Draft presented to the Conference on

- the International Association of Common Property (IASCP) in Oaxaca, Mexico, 9-13 August.
- Andersson, K. and Gibson, C. C. 2007 Decentralized governance and environmental change: local institutional moderation of deforestation in Bolivia. *Journal of Policy Analysis and Management* 26(1): 99-123.
- Angelsen, A. 1999 Agricultural expansion and deforestation: modelling the impact of population, market forces and property rights. *Journal of Development Economics* 58: 185-218.
- Angelsen, A. 2007 Forest cover change in space and time: combining von Thünen and the forest transition. World Bank Policy Research Working Paper 4117. The World Bank, Washington, DC.
- Angelsen, A. 2008a How do we set the reference levels for REDD payments? *In: Angelsen, A. (ed.) Moving ahead with REDD: issues, options and implications*, 53-64. CIFOR, Bogor, Indonesia.
- Angelsen, A. (ed.) 2008b *Moving ahead with REDD: issues, options and implications*. CIFOR, Bogor, Indonesia. 156p.
- Angelsen, A. and Kaimowitz, D. 1999 Rethinking the causes of deforestation: lessons from economic models. *World Bank Research Observer* 14(1): 73-98.
- Angelsen, A. and Kaimowitz, D. (eds) 2001 *Agricultural technologies and tropical deforestation*. CAB International, Wallingford, UK.
- Angelsen, A. and Wertz-Kanounnikoff, S. 2008 What are the key design issues for REDD and the criteria for assessing options? *In: Angelsen, A. (ed.) Moving ahead with REDD: issues, options and implications*. CIFOR, Bogor, Indonesia.
- Angelsen, A., Streck, C., Peskett, L., Brown, J. and Luttrell, C. 2008 What is the right scale for REDD? *In: Angelsen, A. (ed.) Moving ahead with REDD: issues, options and implications*, 31-40. CIFOR, Bogor, Indonesia.
- Antal, M. J. and Gronli, M. 2003 The art, science, and technology of charcoal production. *Industrial & Engineering Chemistry Research* 42(8): 1619-1640.
- Applegate, G., Putz, F. E. and Snook, L. K. 2004 Who pays for and who benefits from improved timber harvesting practices in the tropics: lessons learned and information gaps. CIFOR, Bogor, Indonesia.
- Araujo, C., Bonjean, C. A., Combes, J.-L., Combes Motel, P. and Reis, E. J. 2009 Property rights and deforestation in the Brazilian Amazon. *Ecological Economics* 68(8-9): 2461-2468.
- Arifin, B. 2005 Institutional constraints and opportunities in developing environmental service markets: lessons from institutional studies on RUPES in Indonesia. World Agroforestry Centre, Bogor, Indonesia.

- Arnold, J. E. M. and Stewart, W. C. 1991 Common property resource management in India. Oxford Forestry Institute, University of Oxford, Oxford.
- Arnold, J. E. M., Kohlin, G. and Persson, R. 2006 Woodfuels, livelihoods, and policy interventions: changing perspectives. *World Development* 34(3): 596-611.
- Arriagada, R. A. 2008 Private provision of public goods: applying matching methods to evaluate payments for ecosystem services in Costa Rica. PhD dissertation. North Carolina State University, Raleigh, NC, USA.
- Asner, G. P., Knapp, D. E., Broadbent, E. N., Oliveira, P. J. C., Keller, M. and Silva, J. N. 2005 Selective logging in the Brazilian Amazon. *Science* 310(5747): 480-482.
- Asquith, N. M., Vargas Ríos, M. T. and Smith, J. 2002 Can forest-protection carbon projects improve rural livelihoods? Analysis of the Noel Kempff Mercado climate action project, Bolivia. *Mitigation and Adaptation Strategies for Global Change* 7(4): 323-337.
- Auld, G., Gulbrandsen, L. H. and McDermott, C. L. 2008. Certification schemes and the impacts on forests and forestry. *Annual Review of Environment and Resources* 33: 187-211.
- Baland, J.-M. and Platteau, J.-P. 1996 Halting degradation of natural resources: is there a role for rural communities? Food and Agriculture Organization of the United Nations, Rome. 423p.
- Baland, J.-M. and Platteau, J.-P. 1999 The ambiguous impact of inequality on local resource management. *World Development* 27(5): 773-788.
- Ballesteros, M. A., Nakhooda, S. and Werksman, J. 2009 Power, responsibility, and accountability: re-thinking the legitimacy of institutions for climate finance. WRI Working Paper. World Resources Institute, Washington, DC. 57p. Available from: <http://www.wri.org>.
- Bandiaky, S. 2008 Gender inequality in Malidino Biodiversity Reserve, Senegal: political parties and the 'village approach'. *Conservation and Society* 6(1): 62-73.
- Banerjee, O., Macpherson, A. J. and Alavalapati, J. 2009 Toward a policy of sustainable forest management in Brazil: a historical analysis. *The Journal of Environment Development* 18(2): 130-153.
- Barber, C. V. and Schweithelm, J. 2000 Trial by fire: forest fires and the forestry policy in Indonesia's era of crisis and reform. World Resources Institute, Washington, DC.
- Barbier, E. B., Damania, R. and Léonard, D. 2005 Corruption, trade and resource conversion. *Journal of Environmental Economics and Management* 50(2): 276-299.

- Barnett, T. E. 1990 The Barnett report: a summary of the report of the commission of inquiry into aspects of the timber industry in Papua New Guinea. Asia-Pacific Action Group, Hobart, Tasmania.
- Barr, C. A., Dermawan, A., Purnomo, H. and Komarudin, H. In press. Financial governance and Indonesia's reforestation fund: a political economic analysis of lessons for REDD. CIFOR, Bogor, Indonesia.
- Barrett, C. B. and Arcese, P. 1995 Are integrated conservation–development projects (ICDPs) sustainable? On the conservation of large mammals in Sub-Saharan Africa. *World Development* 23(7): 1073-1084.
- Bauen, A. and Kaltschmitt, M. 2001 Reduction of energy related CO₂ emissions – the potential contribution of biomass. *In: Proceedings of 1st World Conference on Biomass for Energy and Industry, Sevilla, Spain, 5-9 June 2000, Vol. II, 1354-1357.*
- Becker, G. S. 1968 Crime and punishment: an economic approach. *Journal of Political Economy* 76(2): 169.
- Becker, L. C. 2001 Seeing green in Mali's woods: colonial legacy, forest use, and local control. *Annals of the Association of American Geographers* 91(3): 504-526.
- Benecke, G., Friberg, L., Lederer, M. and Schröder, M. 2008 From public–private partnership to market: the clean development mechanism (CDM) as a new form of governance in climate protection. Sonderforschungsbereich, Berlin.
- Benbear, L. S. and Coglianese, C. 2005 Measuring progress: program evaluation of environmental policies. *Environment: Science and Policy for Sustainable Development* 47(2): 22-39.
- Bennett, M. T. 2009 Markets for ecosystem services in China. An exploration of China's 'eco-compensation' and other market-based environmental policies. *Forest Trends, Washington, DC.* 86p.
- Bento, A., Towe, C. and Geoghegan, J. 2007 The effects of moratoria on residential development: evidence from a matching approach. *American Journal of Agricultural Economics* 89(5): 1211-1218.
- Bertault, J.-G. and Sist, P. 1997 An experimental comparison of different harvesting intensities with reduced-impact and conventional logging in East Kalimantan, Indonesia. *Forest Ecology and Management* 94(1-3): 209-218.
- Bezemer, D. and Headey, D. 2008 Agriculture, development, and urban bias. *World Development* 36(8): 1342-1364.
- Bhattacharya, S. C. and Abdul Salam, P. 2002 Low greenhouse gas biomass options for cooking in the developing countries. *Biomass and Bioenergy* 22(4): 305-317.

- Biermann, F., Chan, S., Mert, A. and Pattberg, P. 2007 Multi-stakeholder partnerships for sustainable development: does the promise hold? *In*: Glasbergen, P., Biermann, F. and Mol, A. (eds) Partnerships, governance and sustainable development: reflections on theory and practice. Edward Elgar, Cheltenham, UK.
- Bond, I., Grieg-Gran, M., Wertz-Kanounnikoff, S., Hazlewood, P., Wunder, S. and Angelsen, A. 2009 Incentives to sustain forest ecosystem services: a review and lessons for REDD. Natural Resources Issues No. 16. International Institute for Environment and Development, London with CIFOR, Bogor, Indonesia and World Resources Institute, Washington, DC. 47p.
- Boserup, E. 1965 The conditions of agricultural growth. The economics of agrarian change under population pressure. Aldine, Chicago, IL, USA.
- Bozmoski, A. and Hepburn, C. 2009 The interminable politics of forest carbon: an EU outlook. Background paper for forest carbon finance summit 2009: making forest carbon markets work. Washington, DC. 6-8 March 2009.
- Brandon, K., Redford, K. and Sanderson, S. (eds) 1998 Parks in peril: people, politics, and protected areas. Island Press, Covelo, CA, USA.
- Bray, D. B., Ellis, E. A., Armijo-Canto, N. and Beck, C. T. 2004 The institutional drivers of sustainable landscapes: a case study of the 'Mayan Zone' in Quintana Roo, Mexico. *Land Use Policy* 21(4): 333-346.
- Broadhead, J., Bahdon, J. and Whiteman, A. 2001 Woodfuel consumption modeling and results. Annex 2. *In*: Past trends and future prospects for the utilization of wood for energy. GFPOS/WP/05, global forest products outlook study. Food and Agriculture Organization of the United Nations, Rome.
- Brock, K. and Coulibaly, N. G. 1999 Sustainable rural livelihoods in Mali. IDS Research Report No. 35. Institute of Development Studies, Brighton, UK.
- Brockington, D., Igoe, J. and Schmidt-Soltau, K. 2006 Conservation, human rights, and poverty reduction. *Conservation Biology* 20(1): 250-252.
- Brondizio, E. S. 2008 The Amazonian Caboclo and the Açaí palm: forest farmers in the global market. New York Botanical Garden Press, New York.
- Brown, D., Seymour, F. and Peskett, L. 2008 How do we achieve REDD co-benefits and avoid doing harm? *In*: Angelsen, A. (ed.) Moving ahead with REDD: issues, options and implications, 107-118. CIFOR, Bogor, Indonesia.

- Brown, G. M. 2000 Renewable natural resource management and use without markets. *Journal of Economic Literature* 38(4): 875-914.
- Brown, K. and Pearce, D. W. E. 1994 The causes and consequences of tropical deforestation: the economic and statistical analysis of factors giving rise to the loss of tropical forests. UBC Press, London. 338p.
- Bruce, J. 1998 Learning from comparative experience with agrarian reform. Presented to International Conference on Land Tenure in the Developing World. Cape Town, South Africa, 27–29 January 1998.
- Bruner, A. G., Gullison, R. E., Rice, R. E. and Fonseca, G. A. B. da 2001 Effectiveness of parks in protecting tropical biodiversity. *Science* 291: 125-128.
- Brunswick Research 2009 WWF 2009 forest carbon investor survey: research summary. Available from: http://assets.panda.org/downloads/2009_forest_carbon_investor_research_report.pdf (12 Nov. 2009).
- Bullock, S., Childs, M. and Picken, T. 2009 A dangerous distraction. Why offsetting is failing the climate and people: the evidence. Friends of the Earth, London.
- Bulte, E. H., Damania, R. and López, R. 2007 On the gains of committing to inefficiency: corruption, deforestation and low land productivity in Latin America. *Journal of Environmental Economics and Management* 54(3): 277-295.
- Börner, J., Wunder, S., Wertz-Kanounnikoff, S., Rüginitz-Tito, M., Pereira, L. and Nascimento, N. In press. Direct conservation payments in the Brazilian Amazon: scope and equity implications. *Ecological Economics* in press.
- Campbell, A., Miles, L., Lysenko, I., Hughes, A. and Gibbs, H. 2008 Carbon storage in protected areas: technical report. The United Nations Environment Programme World Conservation Monitoring Centre, Cambridge, UK.
- Campbell, B. M. (ed.) 1996 The Miombo in transition: woodlands and welfare in Africa. CIFOR, Bogor, Indonesia.
- Casson, A. and Obidzinski, K. 2007 From new order to regional autonomy: shifting dynamics of illegal logging in Kalimantan, Indonesia. In: Tacconi, L. (ed.) *Illegal logging: law enforcement, livelihoods and the timber trade*. Earthscan, London.
- Cavendish, W. 2000 Empirical regularities in the poverty–environment relationship of rural households: evidence from Zimbabwe. *World Development* 28(11): 1979-2000.
- CCBA 2008 Climate, community and biodiversity project design standards. 2nd ed. The Climate, Community, and Biodiversity Alliance, Arlington,

- VA, USA. Available from: http://www.climate-standards.org/standards/pdf/ccb_standards_second_edition_december_2008.pdf.
- Cerbu, G., Minang, P., Swallow, B. and Meadu, V. 2009 Global survey of REDD projects: what implications for global climate objectives? ASB Policy Brief No. 12. ASB Partnership for the Tropical Forest Margins, Nairobi, Kenya. Available from: www.asb.cgiar.org.
- Cerutti, P. O. and Tacconi, L. 2008 Forests, illegality, and livelihoods: the case of Cameroon. *Society & Natural Resources* 21(9): 845-853.
- Cerutti, P. O., Nasi, R. and Tacconi, L. 2008 Sustainable forest management in Cameroon needs more than approved forest management plans. *Ecology and Society* 13(2): 36.
- CGD 2009 Cash on delivery: progress-based aid for education. Center for Global Development. Available from: http://www.cgdev.org/section/initiatives/_active/codaaid (12 Nov. 2009).
- Chapin, M., Lamb, Z. and Threlkeld, B. 2005 Mapping indigenous lands. *Annual Review of Anthropology* 34: 619-638.
- Charnley, S. and Poe, M. 2007 Community forestry in theory and practice: where are we now? *Annual Review of Anthropology* 32: 301-336.
- Chazdon, R. L. 2008 Beyond deforestation: restoring forests and ecosystem services on degraded lands. *Science* 320(5882): 1458-1460.
- Chhatre, A. 2007 Accountability in decentralization and the democratic context: theory and evidence from India. Representation, Equity and Environment Working Paper No. 23. World Resources Institute, Washington, DC.
- Chhatre, A. and Agrawal, A. 2008 Forest commons and local enforcement. *Proceedings of the National Academy of Sciences* 105(36): 13186-13191.
- Chhatre, A. and Agrawal, A. 2009 Trade-offs and synergies between carbon storage and livelihood benefits from forest commons. *Proceedings of the National Academy of Sciences* 106(42): 17667-17670.
- Chidumayo, E. N. 1989 Land use, deforestation and reforestation in the Zambian Copperbelt. *Land Degradation and Development* 1(3): 209-216.
- Chomitz, K. M., Buys, P., De Luca, G., Thomas, T. and Wertz-Kanounnikoff, S. 2007 At loggerheads? Agricultural expansion, poverty reduction, and environment in the tropical forests. A World Bank Policy Research Report. The World Bank, Washington, DC.
- Coad, L., Campbell, A., Clark, S., Bolt, K., Roe, D. and Miles, L. 2008 Protecting the future: carbon, forests, protected areas and local livelihoods. Revised ed. The United Nations Environment Programme World Conservation Monitoring Centre, Cambridge, UK.

- Colchester, M. 2006 Forest peoples, customary use and state forests: the case for reform. Paper to 11th Biennial Congress of the International Association for the Study of Common Property. Bali, Indonesia. 19-22 June 2006.
- Colchester, M. 2007 Beyond tenure: rights-based approaches to people and forests: some lessons from the Forest Peoples Programme. Paper to the International Conference on Poverty Reduction in Forests: Tenure, Markets and Policy Reforms, Bangkok, Thailand, 3-7 September 2007. Forest Peoples Programme, London.
- Colchester, M., Boscolo, M., Contreras-Hermosilla, A., Del Gatto, F., Dempsey, J., Lescuyer, G., Obidzinski, K., Pommier, D., Richards, M., Sembiring, S. N. *et al.* 2006 Justice in the forest: rural livelihoods and forest law enforcement. CIFOR, Bogor, Indonesia.
- Colfer, C. J. P. 2005 The complex forest: communities, uncertainty, and adaptive collaborative management. Resources of the Future, Washington, DC and CIFOR, Bogor, Indonesia. 370p.
- Collomb, J. G. and Bikie, H. 2001 1999–2000 Allocation of logging permits in Cameroon: fine-tuning central Africa's first auction system. Global Forest Watch Cameroon and World Resources Institute, Washington, DC.
- Contreras, A. 2003 Creating space for local forest management: the case of the Philippines. *In*: Edmunds, D. and Wollenburg, E. (eds) Local forest management: the impacts of devolution policies, 127-149. Earthscan, London.
- Contreras-Hermosilla, A. 1997 The 'cut-and-run' course of corruption in the forestry sector. *Journal of Forestry* 95: 33-36.
- Contreras-Hermosilla, A. 2000 The underlying causes of forest decline. Occasional Paper No. 30. CIFOR, Bogor, Indonesia.
- Contreras-Hermosilla, A. and Vargas Rios, M. T. 2002 Social, environmental and economic dimensions of forest policy reforms in Bolivia. *Forest Trends*, Washington, DC and CIFOR, Bogor, Indonesia.
- Conyers, D. 2001 Whose elephants are they? Decentralization of control over wildlife management through the CAMPFIRE programme in Binga District, Zimbabwe. Working Paper No. 31. World Research Institute, Washington, DC.
- Cooke, P., Köhlin, G. and Hyde, W. F. 2008 Fuelwood, forests and community management – evidence from household studies. *Environment and Development Economics* 13(01): 103-135.
- Coomes, O. T., Grimard, F., Potvin, C. and Sima, P. 2008 The fate of the tropical forest: carbon or cattle? *Ecological Economics* 65(2): 207-212.

- Corbera, E., Kosoy, N. and Martínez Tuna, M. 2007 Equity implications of marketing ecosystem services in protected areas and rural communities: case studies from Meso-America. *Global Environmental Change* 17(3-4): 365-380.
- Costello, C., Gaines, S. D. and Lynham, J. 2008 Can catch shares prevent fisheries collapse? *Science* 321(5896): 1678-1681.
- Cotula, L., Vermeulen, S., Leonard, R. and Keeley, J. 2009 Land grab or development opportunity? Agricultural investment and international land deals in Africa. International Institute for Environment and Development, London and Food and Agriculture Organization of the United Nations and International Fund for Agricultural Development, Rome. 120p. Available from: <ftp://ftp.fao.org/docrep/fao/011/ak241e/ak241e.pdf>.
- Coughenour, C. 2003 Innovating conservation agriculture: the case of no-till cropping. *Rural Sociology* 68(2): 278-304.
- Cronkleton, P., Pacheco, P., Iburguen, R. and Albornoz, M. A. 2009 Reformas en la tenencia de la tierra y los bosques: la gestión comunal en las tierras bajas de Bolivia. CIFOR and Centro de Estudios para el Desarrollo Laboral y Agrario, La Paz, Bolivia.
- Crook, R. C. and Sverrisson, A. S. 2001 Decentralization and poverty-alleviation in developing countries: a comparative analysis, or is West Bengal unique? IDS Working Paper No. 130. Institute of Development Studies Brighton, UK.
- Culas, R. J. 2007 Deforestation and the environmental Kuznets curve: an institutional perspective. *Ecological Economics* 61(2-3): 429-437.
- Curran, L. M., Trigg, S. N., McDonald, A. K., Astiani, D., Hardiono, Y. M., Siregar, P., Caniago, I. and Kasischke, E. 2004 Lowland forest loss in protected areas of Indonesian Borneo. *Science* 303(5660): 1000-1003.
- Dachang, L. and Edmunds, D. 2003 The promises and limitations of devolution and local forest management in China. *In*: Edmunds, D. and Wollenburg, E. (eds) *Local forest management: the impacts of devolution policies*, 20-54. Earthscan, London.
- Dahal, G. R., Larson, A. M. and Pacheco, P. In press. Outcomes of reform for livelihoods, forest condition and equity. *In*: Larson, A. M., Barry, D., Dahal, G. R. and Colfer, C. J. P. (eds) *Forests for people: community rights and forest tenure reform*. Earthscan, London.
- Damania, R., Fredriksson, P. G. and List, J. A. 2003 Trade liberalization, corruption, and environmental policy formation: theory and evidence. *Journal of Environmental Economics and Management* 46(3): 490-512.
- Danielsen, F., Burgess, N. D., Balmford, A., Donald, P. F., Funder, M., Jones, J. P. G., Alviola, P., Balete, D. S., Blomley, T., Brashares, J.

- et al.* 2009 Local participation in natural resource monitoring: a characterization of approaches. *Conservation Biology* 23(1): 31-42.
- Davis, C., Daviet, F., Nakhooda, S. and Thuault, A. 2009 A review of 25 readiness plan idea notes from the World Bank Forest Carbon Partnership Facility. WRI Working Paper. World Resources Institute, Washington, DC.
- de Graaf, N. R. 2000 Reduced impact logging as part of the domestication of neotropical rainforest. *International Forestry Review* 2(1): 40-44.
- de Jong, W. 2001 The impact of rubber on the forest landscape in Borneo. *In: Angelsen, A. and Kaimowitz, D. (eds) Agricultural technologies and tropical deforestation.* CAB International, Wallingford, UK.
- de Mendonça, M. J. C., Vera Diaz, M. d. C., Nepstad, D., Seroa da Motta, R., Alencar, A., Gomes, J. C. and Ortiz, R. A. 2004 The economic cost of the use of fire in the Amazon. *Ecological Economics* 49(1): 89-105.
- de Sherbinin, A. 2002 A guide to land-use and land-use cover change (LUCC). A collaborative effort of SEDAC and the IGBP/IHDP LUCC Project. Columbia University, New York. http://sedac.ciesin.columbia.edu/tg/guide_frame.jsp?rd=LU&ds=1 (1 Nov. 2009).
- DeFries, R., Hansen, A., Newton, A. C. and Hansen, M. C. 2005 Increasing isolation of protected areas in tropical forests over the past twenty years. *Ecological Applications* 15(1): 19-26.
- Dietz, T., Ostrom, E. and Stern, P. C. 2003 The struggle to govern the commons. *Science* 302(5652): 1907-1912.
- Djogo, T. and Syaf, R. 2003 Decentralization without accountability: power and authority over local forest governance in Indonesia. *In: Suryanata, D., Fox, J. and Brennan, S. (eds) Issues of decentralization and federation in forest governance: proceedings from the Tenth Workshop on Community-based Management of Forestlands, 9-25.* East-West Center, Honolulu, Hawaii.
- Dugan, P. C., Durst, P. B., Ganz, D. J. and McKenzie, P. J. 2003 Advancing assisted natural regeneration (ANR) in Asia and the Pacific. FAO Regional Office for Asia and the Pacific, Bangkok, Thailand.
- Durst, P. B., McKenzie, P. J., Brown, C. L. and Appanah, S. 2006 Challenges facing certification and eco-labelling of forest products in developing countries. *International Forestry Review* 8(2): 193-200.
- Dutschke, M. 2009 The climate stabilization fund: global auctioning of emission allowances to help forests and people. *In: Filho, W. L. and Mannke, F. (eds) Interdisciplinary aspects of climate change, 103-120.* Peter Lang Scientific, Frankfurt and New York.

- Dutschke, M. and Wertz-Kanounnikoff, S. 2008 Financing REDD: linking country needs and financing sources. Infobrief No.17. CIFOR, Bogor, Indonesia.
- Dutschke, M., Wertz-Kanounnikoff, S., Peskett, L., Luttrell, C., Streck, C. and Brown, J. 2008 Mapping potential sources of REDD financing to different needs and national circumstances. CIFOR, Bogor, Indonesia, Amazon Environmental Research Institute, Brasilia, and Overseas Development Institute, London.
- Dykstra, D. and Elias 2003 RIL becomes real in Brazil. International Tropical Timber Organization Tropical Forest Update 13/4.
- Ebeling, J. and Yasué, M. 2009 The effectiveness of market-based conservation in the tropics: forest certification in Ecuador and Bolivia. *Journal of Environmental Management* 90(2): 1145-1153.
- EC 2008 Addressing the challenges of deforestation and forest degradation to tackle climate change and biodiversity loss. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Com(2008) 645/3. European Commission, Brussels.
- Echavarría, M., Vogel, J., Albán, M. and Meneses, F. 2004 The impacts of payments for watershed services in Ecuador. *Markets for Environmental Services* 4. International Institute for Environment and Development, London. 61p.
- EcoSecurities 2009 The forest carbon offsetting survey 2009. EcoSecurities, Dublin, Ireland. Available from: http://www.ecosecurities.com/Standalone/Forest_Carbon_Offsetting_Trends_Survey_2009/default.aspx.
- Elbow, K., Furth, R., Knox, A., Bohrer, K., Hobbs, M., Leisz, S. and Williams, M. 1998 Synthesis of trends and issues raised by land tenure country profiles of West African countries, 1996. *In*: Bruce, J. (ed.) *Country profiles of land tenure: Africa, 1996*. Research Paper No. 130. Land Tenure Center, University of Wisconsin, Madison, WI, USA. Available from: http://pdf.wri.org/ref/elbow_98_synthesis.pdf (1 Nov. 2009).
- Elías, S. and Whittman, H. 2005 State, forest and community: decentralization of forest administration in Guatemala. *In*: Pierce, C. and Capistrano, D. (eds) *The politics of decentralization: forests, power and people*, 282-296. Earthscan, London.
- Eliasch, J. 2008 Climate change: financing global forests. The Eliasch review. Office of Climate Change, London.
- Ellsworth, L. and White, A. 2004 Deeper roots: strengthening community tenure security and community livelihoods. Ford Foundation, New

- York. Available from: http://www.fordfound.org/pdfs/impact/deeper_roots.pdf.
- Elmqvist, T., Pyykönen, M., Tengö, M., Rakotondraso, F., Rabakonandrianina, E. and Radimilahy, C. 2007 Patterns of loss and regeneration of tropical dry forest in Madagascar: the social institutional context. *PLoS ONE* 2(5): e402.
- Evans, J. and Turnbull, J. W. 2004 *Plantation forestry in the tropics: the role, silviculture, and use of planted forests for industrial, social, environmental, and agroforestry purposes*. 3rd ed. Oxford University Press, Oxford. 467p.
- Ezzine de Blas, D. and Ruiz Pérez, M. 2008 Prospects for reduced impact logging in Central African logging concessions. *Forest Ecology and Management* 256(7): 1509-1516.
- Fan, C. S., Lin, C. and Treisman, D. 2009 Political decentralization and corruption: evidence from around the world. *Journal of Public Economics* 93(1-2): 14-34.
- FAO 1985 *Tropical forestry action plan*. Food and Agriculture Organization of the United Nations, Rome. <http://www.ciesin.columbia.edu/docs/002-162/002-162.html>.
- FAO 2001 *State of the world's forests 2001*. Food and Agriculture Organization of the United Nations, Rome.
- FAO 2005 *Best practices for improving law compliance in the forestry sector*. Forestry Paper No. 145. Food and Agriculture Organization of the United Nations, Rome.
- FAO 2006 *Global forest resource assessment 2005. Progress towards sustainable forest management*. Food and Agriculture Organization of the United Nations, Rome.
- FAO 2009a FAOSTAT. Food and Agricultural Organization of the United Nations, Rome. <http://faostat.fao.org/default.aspx> (22 Sep. 2009).
- FAO 2009b FAOSTAT. Food and Agriculture Organization of the United Nations, Rome. <http://faostat.fao.org/site/626/default.aspx#ancor> (9 Oct. 2009).
- FAO 2009c *Forest tenure assessment*. Food and Agriculture Organization of the United Nations, Rome. <http://www.fao.org/forestry/tenure/en/> (1 Nov. 2009).
- Ferraro, P. 2009 Regional review of payments for watershed services: Sub-Saharan Africa. *Journal of Sustainable Forestry* 28(3-4): 525-550.
- Ferraro, P. J. and Pattanayak, S. K. 2006 Money for nothing? A call for empirical evaluation of biodiversity conservation investments. *PLoS Biology* 4(4): 482-488.

- Finley-Brook, M. 2007 Indigenous land tenure insecurity fosters illegal logging in Nicaragua. *International Forestry Review* 9(4): 850-864.
- Fitzpatrick, D. 2006 Evolution and chaos in property rights systems: the third world tragedy. *Yale Law Journal* 115: 996-1048.
- Forest Carbon Partnership Facility (FCPF) 2009 REDD implementation framework. Presented to Global Dialogues on R-PP Preparation, 13–14 August. (www.forestcarbonpartnership.org/fcp/sites/forestcarbonpartnership.org/files/Documents/PDF/Oct2009/Day%202_2%20REDD_Implementation_Framework.pdf).
- Forest Peoples Programme (FPP) 2008 The Forest Carbon Partnership Facility: facilitating the weakening of indigenous peoples' rights to lands and resources. Forest Peoples Programme, Moreton-in-Marsh, UK.
- Forest Peoples Programme (FPP) 2007 Making FPIC – free, prior and informed consent – work: challenges and prospects for indigenous peoples. FPIC Working Papers. Forest Peoples Programme, Moreton-in-Marsh, UK.
- Forsyth, T. 2007 Promoting the 'development dividend' of climate technology transfer: can cross-sector partnerships help? *World Development* 35(10): 1684-1698.
- Forsyth, T. and Walker, A. 2008 Forest guardians, forest destroyers: the politics of environmental knowledge in northern Thailand. University of Washington Press, Seattle, WA, USA.
- Fox, J. 2002 Siam mapped and mapping in Cambodia: boundaries, sovereignty, and indigenous conceptions of space. *Society and Natural Resources* 15: 65-78.
- Fox, J. 2008 The production of forests: tree cover transitions in Thailand, Laos, and southern China. Paper to the Social Life of Forests conference. University of Chicago, Chicago, IL, USA, May 2008.
- Friends of the Earth 2009 Cana Bois: plundering protected areas in Cameroon for the European market. Friends of the Earth, Yaoundé, Cameroon.
- Fronzel, M. and Schmidt, C. M. 2005 Evaluating environmental programs: the perspective of modern evaluation research. *Ecological Economics* 55(4): 515-526.
- Gaston, K. J., Jackson, S. F., Cantú-Salazar, L. and Cruz-Piñón, G. 2008 The ecological performance of protected areas. *Annual Review of Ecology, Evolution, and Systematics* 39(1): 93-113.
- Gaveau, D. L. A., Epting, J., Lyne, O., Linkie, M., Kumara, I., Kanninen, M. and Leader-Williams, N. 2009 Evaluating whether protected areas reduce tropical deforestation in Sumatra. *Journal of Biogeography* 36(11): 2165-2175.

- Gebremedhin, B., Pender, J. and Tesfay, G. 2003 Community natural resource management: the case of woodlots in northern Ethiopia. *Environment and Development Economics* 8(1): 129-148.
- GEF 1998 GEF evaluation of experience with conservation trust funds. GEF/C.12/Inf.6. Global Environment Facility, Washington, DC.
- Geist, H. J. and Lambin, E. F. 2001 What drives tropical deforestation? A meta-analysis of proximate and underlying causes of deforestation based on subnational case study evidence. CC Report Series No. 4. Land-Use and Land-Cover Change International Project Office, Louvain-la-Neuve, Belgium. 115p.
- Geist, H. J. and Lambin, E. F. 2002 Proximate causes and underlying driving forces of tropical deforestation. *BioScience* 52(2): 143-150.
- Ghimire, K. B. and Pimbert, M. P. (eds) 1997 Social change and conservation. Earthscan, London. 352p.
- Gibbs, H. K., Brown, S., Niles, J. O. and Foley, J. A. 2007 Monitoring and estimating tropical forest carbon stocks: making REDD a reality. *Environmental Research Letters* 4(2): 045023.
- Gibson, C. C., Williams, J. T. and Ostrom, E. 2005 Local enforcement and better forests. *World Development* 33(2): 273-284.
- Giglio, L., Csizsar, I., Restás, Á., Morisette, J. T., Schroeder, W., Morton, D. and Justice, C. O. 2008 Active fire detection and characterization with the advanced spaceborne thermal emission and reflection radiometer (ASTER). *Remote Sensing of Environment* 112(6): 3055-3063.
- Glasbergen, P. 2007 Setting the scene: the partnership paradigm in the making. *In: Glasbergen, P., Biermann, F. and Mol, A. (eds) Partnerships, governance and sustainable development: reflections on theory and practice*, 1-25. Edward Elgar, Cheltenham, UK.
- Global Witness 2009 Honest engagement: transparency and civil society participation in REDD. Global Witness, London.
- GOFC-GOLD 2009 Reducing greenhouse gas emissions from deforestation and degradation in developing countries: a sourcebook of methods and procedures for monitoring, measuring and reporting, GOFC-GOLD Report version COP14-2. GOFC-GOLD Project Office, Natural Resources Canada, Alberta, Canada. <http://www.gofc-gold.uni-jena.de/redd>.
- Goldstein, M. and Udry, C. 2008 The profits of power: land rights and agricultural investment in Ghana. *Journal of Political Economy* 116(6): 981-1022.
- Gould, K. A., Carter, D. R. and Shrestha, R. K. 2006 Extra-legal land market dynamics on a Guatemalan agricultural frontier: implications for neoliberal land policies. *Land Use Policy* 23(4): 408-420

- Government of Vietnam 2008 Readiness plan ideas note (RPIN). The Forest Carbon Partnership Facility Washington, DC. <http://www.forestcarbonpartnership.org/fcp/VN>.
- Granda, P. 2005 Carbon sink plantations in the Ecuadorian Andes: impacts of the Dutch FACE-PROFAFOR monoculture tree plantations' project on indigenous and peasant communities. WRM Series on Tree Plantations No. 1. World Rainforest Movement, Montevideo, Uruguay.
- Grassi, G., Monni, S., Federici, S., Achard, F. and Mollicone, D. 2008 Applying the conservativeness principle to REDD to deal with the uncertainties of the estimates. *Environmental Research Letters* 3(3): 035005.
- Gray, J. A. 2002 Forest concession policies and revenue systems: country experience and policy changes for sustainable tropical forestry. World Bank Technical Paper No. 522. The World Bank, Washington, DC.
- Greenpeace 2007 Carving up the Congo. Greenpeace, London. <http://www.greenpeace.org.uk/media/reports/carving-up-the-congo>.
- Greenpeace 2009 Summary of the 'REDD from the Conservation Perspective' report. Commissioned by Greenpeace from the University of Freiburg Institute of Forest Policy. <http://www.greenpeace.org/raw/content/usa/press-center/reports4/greenpeace-summary-of-the-red.pdf>.
- Griffiths, T. 2005 Indigenous peoples and the World Bank: experiences with participation. Forest Peoples Programme, Moreton-in-Marsh, UK.
- Griffiths, T. 2008 Seeing 'REDD'? Forests, climate change mitigation and the rights of indigenous peoples and local communities. Update for Poznan (UNFCCC COP 14). Forest Peoples Programme, Moreton-in-Marsh, UK.
- Griffiths, T. 2007 Seeing 'RED'? 'Avoided deforestation' and the rights of indigenous peoples and local communities. Forest Peoples Programme, Moreton-in-Marsh, UK. <http://www.forestpeoples.org/>.
- Grindeff, I. 2009. Eco firm pays out for PNG carbon trading. *The Age*, 18 June. <http://news.theage.com.au/breaking-news-world/eco-firm-pays-out-for-png-carbon-trading-20090618-cj1r.html>.
- Grondard, N., Loisel, C., Martinet, A. and Routier, J. B. 2008 Analysis of 7 outstanding issues for the inclusion of tropical forests in the international climate governance. Office National des Forêts, Paris.
- Guariguata, M. R., Cornelius, J. P., Locatelli, B., Forner, C. and Sánchez-Azofeifa, G. A. 2008 Mitigation needs adaptation: tropical forestry and climate change. *Mitigation and Adaptation Strategies for Climate Change* 13(8): 793-808.

- Gupta, G. and Köhlin, G. 2006 Preferences for domestic fuel: analysis with socio-economic factors and rankings in Kolkata, India. *Ecological Economics* 57(1): 107-121.
- Gupta, A. and Siebert, U. 2004 Combating forest corruption: the forest integrity network. *Journal of Sustainable Forestry* 19(1-3): 337-349.
- Gustafsson, O., Krusa, M., Zencak, Z., Sheesley, R. J., Granat, L., Engstrom, E., Praveen, P. S., Rao, P. S. P., Leck, C. and Rodhe, H. 2009 Brown clouds over South Asia: biomass or fossil fuel combustion? *Science* 323(5913): 495-498.
- Hajer, M. 1996 Ecological modernization as cultural politics. *In*: Lash, S., Szerszynski, B. and Wynne, B. (eds) *Risk, environment and modernity: towards a new ecology*, 246-268. Sage, London.
- Hajer, M. and Wagenaar, H. (eds) 2003 *Deliberative policy analysis: understanding governance in the network society*. Cambridge University Press, Cambridge, UK.
- Hamilton, K., Sjardin, M., Shapiro, A. and Marcello, T. 2009 Fortifying the foundation: state of the voluntary carbon markets 2009. Ecosystem Marketplace, New York and New Carbon Finance, Washington, DC. http://ecosystemmarketplace.com/documents/cms_documents/StateOfTheVoluntaryCarbonMarkets_2009.pdf (12 Nov. 2009).
- Hansen, C. P. and Treue, T. 2008 Assessing illegal logging in Ghana. *International Forestry Review* 10(4): 573-590.
- Harvey C., Zerbock O., Papageorgiou S. and Parra A. [in press]. What is needed to make REDD work on the ground? Lessons learned from pilot forest carbon initiatives. Conservation International, Arlington, Virginia, USA.
- Healey, J. R., Price, C. and Tay, J. 2000 The cost of carbon retention by reduced impact logging. *Forest Ecology and Management* 139(1-3): 237-255.
- Henman, J., Hamburg, S. and Vega, A. S. 2008 Feasibility and barriers to entry for small-scale CDM forest carbon projects: a case study from the northeastern Peruvian Amazon. *The Carbon & Climate Law Review* 2(3): 254-263.
- Herold, M. 2009 An assessment of national forest monitoring capabilities in tropical non-Annex I countries: recommendations for capacity building. The Prince's Rainforests Project, London, and the Government of Norway, Oslo, Norway. 62p. http://princes.3cdn.net/8453c17981d0ae3cc8_q0m6vsqxd.pdf (4 Nov. 2009).
- Heyman, J. and Ariely, D. 2004 Effort for payment. A tale of two markets. *Psychological Science* 15(11): 787-793.

- Hofstad, O. 1997 Woodland deforestation by charcoal supply to Dar es Salaam. *Journal of Environmental Economics and Management* 33: 17-32.
- Hofstad, O. 2008 A theoretical analysis of illegal wood harvesting as predation – with two Ugandan illustrations. *Scandinavian Forest Economics* 42: 441-452.
- Holck, M. 2008 Participatory forest monitoring: an assessment of the accuracy of simple cost-effective methods. *Biodiversity and Conservation* 17(8): 2023-2036.
- Holden, S. 2001 A century of technological change and deforestation in the miombo woodlands of northern Zambia. *In: Angelsen, A. and Kaimowitz, D. (eds) Agricultural technologies and tropical deforestation.* CAB International, Wallingford, UK.
- Holland, J. M. 2004 The environmental consequences of adopting conservation tillage in Europe: reviewing the evidence. *Agriculture, Ecosystems & Environment* 103(1): 1-25.
- Holmes, T. P., Blate, G. M., Zweede, J. C., Pereira, R., Barreto, P., Boltz, F. and Bauch, R. 2002 Financial and ecological indicators of reduced impact logging performance in the eastern Amazon. *Forest Ecology and Management* 163(1-3): 93-110.
- Honey-Rosés, J. 2009 Illegal logging in common property forests. *Society & Natural Resources: An International Journal* 22(10): 916-930.
- Huang, M., Upadhyaya, S. K., Jindal, R. and Kerr, J. 2009 Payments for watershed services in Asia: a review of current initiatives. *Journal of Sustainable Forestry* 28(3): 551-575.
- Huther, J. and Shah, A. 2000 Anti-corruption policies and programs: a framework for evaluation. Policy Research Working Paper 2501. The World Bank, Washington, DC.
- Hutton, J. M., Adams, W. M. and Murombedzi, J. C. 2005 Back to the barriers? Changing narratives in biodiversity conservation. *Forum for Development Studies* 17: 365-380.
- Ibrekk, H. O. and Studsrød, J. E. 2009 Review of the embassy's development assistance portfolio: environment and climate change. 'Greening and climate proofing of the portfolio'. Norad Report 1/2009 discussion. Norwegian Agency for Development Cooperation, Oslo. 39p.
- IEA 2006 World energy outlook. International Energy Agency, Paris.
- IETA 2009 IETA's principles for reducing emissions and enhancing sequestration in the land-use sector. International Emissions Trading Association, Geneva. <http://www.ieta.org/ieta/www/pages/getfile.php?docID=3278> (24 Nov. 2009).

- ILO 1990 Occupational safety and health in forestry. International Labour Organization, Geneva.
- Ingram, J., Stevens, T., Clements, T., Hatchwell, M., Krueger, L., Victurine, R., Holmes, C. and Wilkie, D. 2009 WCS REDD project development guide. TransLinks. <http://www.translinks.org/ToolsandTrainingMaterials/tabid/2064/language/en-US/Default.aspx> (13 Nov. 2009).
- IPCC 2003 Good practice guidance for land use, land-use change and forestry. Penman, J. *et al.* (eds). National Greenhouse Gas Inventories Programme, Institute for Global Environmental Strategies, Kanagawa, Japan.
- IPCC 2006 IPCC Guidelines for national greenhouse gas inventories. Eggleston, H. S., Buendia, L., Miwa, K., Ngara, T. and Tanabe, K. (eds). National Greenhouse Gas Inventories Programme, Institute for Global Environmental Strategies, Kanagawa, Japan.
- IPCC 2007 IPCC fourth assessment report. Report by Working Group I, The physical science basis. Cambridge University Press, Cambridge, UK.
- IWG-IFR 2009 Report of the informal working group on interim finance for REDD+. Informal Working Group on Interim Finance for REDD. http://www.unredd.net/index.php?option=com_docman&task=doc_details&Itemid=&gid=1096 (12 Nov. 2009).
- Jack, B. K., Leimona, B. and Ferraro, P. 2009 A revealed preference approach to estimating supply curves for ecosystem services: use of auctions to set payments for soil erosion control in Indonesia. *Conservation Biology* 23(2): 359-367.
- Jagger, P. 2008 Forest incomes after Uganda's forest sector reform: are the poor gaining? CGIAR Systemwide Program on Collective Action and Property Rights (CAPRI). Working Paper Series No. 92. International Food Policy Research Institute, Washington, DC.
- Jagger, P. 2009 Forest sector reform, livelihoods and sustainability in western Uganda. *In*: German, L., Karsenty, A. and Tiani, A. M. (eds) *Governing Africa's forests in a globalized world*. Earthscan, Washington, DC and CIFOR, Bogor, Indonesia.
- Jagger, P., Pender, J. and Gebremedhin, B. 2005 Trading off environmental sustainability for empowerment and income: woodlot devolution in northern Ethiopia. *World Development* 33(9): 1491-1510.
- Jayasuriya, S. 2001 Agriculture and deforestation in tropical Asia: an analytical framework. *In*: Angelsen, A. and Kaimowitz, D. (eds) *Agricultural technologies and tropical deforestation*. CAB International, Wallingford, UK.

- Jindal, R., Swallow, B. and Kerr, J. 2008 Forestry-based carbon sequestration projects in Africa: potential benefits and challenges. *Natural Resources Forum* 32(2): 116-130.
- Johns, T. and Johnson, E. 2009 An overview of readiness for REDD: a compilation of readiness activities prepared on behalf of the Forum on Readiness for REDD, Version 1.2. The Woods Hole Research Center Falmouth, MA, USA. <http://www.whrc.org/Policy/REDD/> (12 Nov. 2009).
- Johns, J. S., Barreto, P. and Uhl, C. 1996 Logging damage during planned and unplanned logging operations in the eastern Amazon. *Forest Ecology and Management* 89(1-3): 59-77.
- Johns, T., Merry, F., Stickler, C., Nepstad, D., Laporte, N. and Goetza, S. 2008 A three-fund approach to incorporating government, public and private forest stewards into a REDD funding mechanism. *International Forestry Review* 10(3): 458-464.
- Jumbe, C. and Angelsen, A. 2006 Do the poor benefit from devolution policies? Evidence from forest co-management in Malawi. *Land Economics* 82(4): 562-581.
- K: TGAL 2008 Progress report. Kyoto: Think Global, Act Local. University of Twente, Enschede, Netherlands. Unpublished project material.
- Kaimowitz, D. 2003 Forest law enforcement and rural livelihoods. *International Forestry Review* 5(3): 199-210.
- Kaimowitz, D. and Angelsen, A. 1998 Economic models of tropical deforestation. A review. CIFOR, Bogor, Indonesia. 139p.
- Kaimowitz, D. and Angelsen, A. 2008 Will livestock intensification help save Latin America's forests? *Journal of Sustainable Forestry* 27(1-2): 6-24.
- Kaimowitz, D., Byron, N. and Sunderlin, W. D. 1998 Public policies to reduce inappropriate tropical deforestation. *In: Lutz, E. (ed.) Agriculture and environment: perspectives on sustainable rural development.* The World Bank, Washington, DC.
- Kalumiana, O. S. and Kisakye, R. 2001 Study on the establishment of a sustainable charcoal production and licensing system in Masindi and Nakasongola Districts. Report prepared for ACDI/VOCA EPED Project. Masindi, Uganda.
- Kammen, D. M. 2000 Case study #1: research, development and commercialization of the Kenya Ceramic Jiko (KCJ), methodological and technological issues in technology transfer. Cambridge University Press, Cambridge, UK and New York.
- Kanninen, M., Murdiyarsa, D., Seymour, F., Angelsen, A., Wunder, S. and German, L. 2007 Do trees grow on money? The implications

- of deforestation research for policies to promote REDD. Forest Perspectives 4. CIFOR, Bogor, Indonesia.
- Karky, B. S. 2008 The economics of reducing emissions from community managed forest in Nepal Himalaya. PhD Thesis, University of Twente, Enschede, Netherlands.
- Karousakis, K. 2007 Incentives to reduce GHG emissions from deforestation: lessons from Costa Rica and Mexico. Organisation for Economic Cooperation and Development, Paris.
- Karsenty, A. In press. Forest taxation regime for tropical forests: lessons from central Africa. *International Forestry Review*.
- Karsenty, A., Drigo, I. G., Piketty, M.-G. and Singer, B. 2008 Regulating industrial forest concessions in central Africa and South America. *Forest Ecology and Management* 256(7): 1498-1508.
- Kaufmann, D., Kraay, A. and Mastruzzi, M. 2006 Governance matters V: governance indicators for 1996-2005. World Bank Policy Research Working Paper 4012. The World Bank, Washington, DC.
- Kaufmann, D., Kraay, A. and Mastruzzi, M. 2008 Governance matters VIII: aggregate and individual governance indicators, 1996-2008. Policy Research Working Paper 4978. The World Bank, Washington, DC. 105p.
- Keeley, J. and Scoones, I. 1999 Understanding environmental policy processes: a review. IDS Working Papers 89. Institute of Development Studies, Brighton, UK.
- Kern, K. and Bulkeley, H. 2009 Cities, Europeanization and multi-level governance: governing climate change through transnational municipal networks. *Journal of Common Market Studies* 47(2): 309-332.
- Killick, T. 2004 Politics, evidence and the new aid agenda. *Development Policy Review* 22(1): 5-29.
- Kishor, N. and Damania, R. 2007 Crime and justice in the Garden of Eden: improving governance and reducing corruption in the forestry sector. *In*: Campos, E. J. and Pradhan, S. (eds) *The many faces of corruption*. The World Bank, Washington, DC.
- Knöpfle, M. 2004 A study on charcoal supply in Kampala. Ministry of Energy and Mineral Development, Kampala, Uganda. 68p.
- Koerberle, S., Walliser, J. and Stavreski, Z. (eds) 2006 Budget support as more effective aid? Recent experiences and emerging lessons. The World Bank, Washington, DC. 524p.
- Kohlin, G. and Parks, P. J. 2001 Spatial variability and disincentives to harvest. *Land Economics* 77(2): 206-218.

- Kolstad, I. and Søreide, T. 2009 Corruption in natural resource management: implications for policy makers. *Resources Policy* 34(4): 214-226.
- Kolstad, I. and Wiig, A. 2009 Is transparency the key to reducing corruption in resource-rich countries? *World Development* 37(3): 521-532.
- Koyuncu, C. and Yilmaz, R. 2009 The impact of corruption on deforestation: a cross-country evidence. *The Journal of Developing Areas* 42(2): 213-222.
- Krueger, A. O., Schiff, M. and Valdes, A. 1988 Agricultural incentives in developing countries: measuring the effect of sectoral and economy wide policies. *World Bank Economic Review* 2(3): 255-271.
- Lamloom, S. H. and Savidge, R. A. 2003 A reassessment of carbon content in wood: variation within and between 41 North American species. *Biomass and Bioenergy* 25(4): 381-388.
- Landell-Mills, N. and Porras, I. T. 2002 Silver bullet or fools' gold? A global review of markets for forest environmental services and their impact on the poor. Instruments for Sustainable Private Sector Forestry Series. International Institute for Environment and Development, London.
- Larmour, P. 2007 A short introduction to corruption and anti corruption. CIES e-Working Paper No. 37. CIES-ISCTE Centre for Research and Studies in Sociology, Lisbon, Portugal.
- Larsen, C. S. 2003 Promoting aboriginal territoriality through interethnic alliances: the case of the Cheslatta T'en in northern British Columbia. *Human Organization* 62(1): 74-84.
- Larsen, H. O., Olsen, C. S. and Boon, T. E. 2000 The non-timber forest policy process in Nepal: actors, objectives and power. *Forest Policy and Economics* 1(3-4): 267-281.
- Larson, A. M. 2002 Natural resources and decentralization in Nicaragua: are local governments up to the job? *World Development* 30(1): 17-31.
- Larson, A. M. 2003 Decentralisation and forest management in Latin America: towards a working model. *Public Administration and Development* 23(3): 211-226.
- Larson, A. M. 2005a Democratic decentralization in the forestry sector: lessons learned from Africa, Asia and Latin America. *In*: Pierce, C. and Capistrano, D. (eds) *The politics of decentralization: forests, power and people*, 32-62. Earthscan, London.
- Larson, A. M. 2005b Formal decentralization and the imperative of decentralization 'from below': a case study of natural resource management in Nicaragua. *In*: Ribot, J. C. and Larson, A. M. (eds) *Democratic decentralization through a natural resource lens*, 55-70. Routledge, London.

- Larson, A. M. 2008 Indigenous peoples, representation and citizenship in Guatemalan forestry. *Conservation and Society* 6(1): 35-48.
- Larson, A. M. and Ribot, J. C. 2005 Democratic decentralisation through a natural resource lens: an introduction. *In: Ribot, J. C. and Larson, A. M. (eds) Democratic decentralization through a natural resource lens*, chap. 1. Routledge, London.
- Larson, A. and Ribot, J. 2007 The poverty of forestry policy: double standards on an uneven playing field. *Sustainability Science* 2(2): 189-204.
- Larson, A. M. and Soto, F. 2008 Decentralization of natural resource governance regimes. *Annual Review of Environment and Resources* 33(1): 213-239.
- Larson, A., Barry, D., Cronkleton, P. and Pacheco, P. 2008 Tenure rights and beyond: community access to forest resources in Latin America. Occasional Paper No. 50. CIFOR, Bogor, Indonesia.
- Larson, A., Barry, D., Dahal, G. R. and Colfer, C. J. P. (eds) In press-a. *Forests for people: community rights and forest tenure reform*. Earthscan, London.
- Larson, A. M., Marfo, E., Cronkleton, P. and Pulhin, J. M. In press-b. Authority relations under new forest tenure arrangements. *In: Larson, A. M., Barry, D., Dahal, G. R. and Colfer, C. J. P. (eds) Forests for people: community rights and forest tenure reform*. Earthscan, London.
- Larwanou, M., Abdoulaye, M. and Reij, C. 2006 Etude de la régénération naturelle assistée dans la Région de Zinder (Niger): une première exploration d'un phénomène spectaculaire. <http://www.frameweb.org/CommunityBrowser.aspx?id=2801&lang=en-US> (10 Oct. 2009).
- Laurance, W. 2009 Roads to rainforests ruin. *New Scientist* 203(2723): 24-25.
- Lawlor, K, Olander, L. P., Weinthal, E. 2009 Reducing emissions from deforestation: options for policymakers. Working paper, Nicholas Institute for Environmental Policy Solutions, Durham, NC, USA
- Lawson, A., Booth, D., Msuya, M., Wangwe, S. and Williamson, T. 2005 Does general budget support work? Evidence from Tanzania. Overseas Development Institute, London, and Daima Associates, Dar es Salaam, Tanzania. <http://www.odi.org.uk/resources/download/2346-8-page-summary.pdf>.
- Le Billon, P. 2000 The political ecology of transition in Cambodia 1989–1999: war, peace and forest exploitation. *Development and Change* 31(4): 785-805.
- Leeuw, F. and Vaessen, J. 2009 Impact evaluations and development: NONIE guidance on impact evaluation. The World Bank, Washington,

- DC. <http://www.worldbank.org/ieg/nonie/guidance.html>
(12 Nov. 2009).
- Lele, U., Kumar, N., Husain, S. A., Zazueta, A. and Kelly, L. 2000 The World Bank forest strategy: striking the right balance. The World Bank, Washington, DC. 153p.
- Lentini, M., Schulze, M. and Zweede, J. In press. Os desafios ao sistema de concessões de florestas públicas na Amazonia. *Ciencia Hoje*.
- Letcher, S. G. and Chazdon, R. L. 2009 Rapid recovery of biomass, species richness, and species composition in a forest chronosequence in northeastern Costa Rica. *Biotropica* 41(5): 608-617.
- Leverington, F., Hockings, M. and Lemos Costa, K. 2008 Management effectiveness evaluation in protected areas. Report for the project global study into management effectiveness evaluation of protected areas. The World Conservation Union, World Commission on Protected Areas, The Nature Conservancy, World Wide Fund for Nature, University of Queensland, Gatton, Australia. 70p.
- Levin, K., McDermott, C. and Cashore, B. 2008 The climate regime as global forest governance: can reduced emissions from deforestation and forest degradation (REDD) initiatives pass a 'dual effectiveness' test? *International Forestry Review* 10(3): 538-549
- Lincoln, P. 2008. Stalled gaps or rapid recovery – the influence of damage on post-logging forest dynamics and carbon balance. PhD Thesis, University of Aberdeen, UK.
- Linder, S. 2000 Coming to terms with the public-private partnership: a grammar of multiple meanings. *In: Rosenau, T. (ed.) Public-private policy partnerships*, 19-36. MIT Press, Cambridge, MA, USA.
- Lloyd, B. and Subbarao, S. 2009 Development challenges under the Clean Development Mechanism (CDM) – can renewable energy initiatives be put in place before peak oil? *Energy Policy* 37(1): 237-245.
- Lopez, R. A. and Hathie, I. 2000 The structure of government intervention in African agriculture. *Journal of Development Studies* 37(1): 57-72.
- Lovera, S. 2008 The hottest REDD issues: rights, equity, development, deforestation and governance by indigenous peoples and local communities. Commission on Environmental, Economic and Social Policies and Global Forest Coalition, Gland, Switzerland.
- Luoga, E. J., Witkowski, E. T. F. and Balkwill, K. 2002 Harvested and standing wood stocks in protected and communal miombo woodlands of eastern Tanzania. *Forest Ecology and Management* 164(1-3): 15-30.
- Luttrell, C., Schreckenberg, K. and Peskett, L. 2007 The implications of carbon financing for pro-poor community forestry. *Forestry Briefing*

14. Overseas Development Institute, London. <http://www.odi.org.uk/resources/download/438.pdf>.
- Lynch, O. J. and Talbott, K. 1995 *Balancing acts: community based forest management and national law in Asia and the Pacific*. World Resources Institute, Washington, DC. 188p.
- Madeira, E. M. 2009 *REDD in design: assessment of planned first generation activities in Indonesia to reduce emissions from deforestation and degradation (REDD)*. RFF Discussion Paper 09-49. Resources for the Future, Washington, DC.
- MacDicken, K. G. 1997 *A guide to monitoring carbon storage in forestry and agroforestry projects*. Winrock International Institute for Agricultural Development, Arlington, VA, USA. <http://www.fcarbonsinks.gov.cn/thjl/Winrock%20International%20%E7%A2%B3%E7%9B%91%E6%B5%8B%E6%8C%87%E5%8D%97.pdf>.
- Macpherson, A. J. 2007. *Following the rules: a bioeconomic policy simulation of a Brazilian forest concession*. PhD Thesis, University of Florida, Gainesville, FL, USA.
- Magrath, W. B., Grandalski, R. L., Stuckey, G. L., Vikanes, G. B. and Wilkinson, G. R. 2007 *Timber theft prevention: introduction to security for forest managers*. East Asia and Pacific Region Sustainable Development Discussion Paper. The World Bank, Washington, DC.
- Mahar, D. and Ducrot, E. 1998 *Land-use zoning on tropical frontiers. Emerging lessons from the Brazilian Amazon*. Economic Development Institute, The World Bank, Washington, DC.
- Manor, J. 2000 *Local government in South Africa: potential disaster despite genuine promise*. Paper prepared for the Department for International Development. Institute for Development Studies, Brighton, UK.
- Manor, J. 2004 *User communities: a potentially damaging second wave of decentralization?* *European Journal of Development Research* 16(1): 192-213.
- March, J. G. and Olsen, J. P. 1995 *Democratic governance*. The Free Press, New York.
- Marfo, E., Colfer, C. J. P., Kante, B. and Elías, S. Forthcoming. *From discourse to policy: the practical interface of statutory and customary land and forest rights*. *In*: Larson, A. M., Barry, D., Dahal, G. R. and Colfer, C. J. P. (eds) *Forests for people: community rights and forest tenure reform*. Earthscan, London.
- Margoluis, R., Stem, C., Salafsky, N. and Brown, M. 2009 *Design alternatives for evaluating the impact of conservation projects*. *New Directions for Evaluation* 2009(122): 85-96.
- Mather, A. 1992 *The forest transition*. *Area* 24: 367-379.

- Mather, A. S. 2007 Recent Asian forest transitions in relation to forest transition theory. *International Forestry Review* 9(1): 491-502.
- Matope, J. J. 2000 Blantyre city environmental profile. Blantyre City Assembly/UNDP. <http://74.125.77.132/search?q=cache:ceicj1VQn9sJ:staging.unchs.org/cdrom/governance/html/books%255Cbcep.df+forest+degradation+Blantyre&cd=5&hl=no&ct=clnk&gl=no&client=firefox-a#56> (9 Nov. 2009).
- Mauro, P. 1995 Corruption and growth. *The Quarterly Journal of Economics* 110(3): 681-712.
- Mawhood, P. 1983 *Local government in the Third World*. John Wiley, Chichester, UK.
- Mayntz, R. 1993 Policy-netzwerke und die logik von verhandlungssystemen. *In: Hertier, A. (ed.) Policy-analyse. Kritik und neuorientierung*, 39-56. Politische Vierteljahresschrift, Opladen, Germany.
- McKean, M. A. 1992 Success on the commons: a comparative examination of institutions for common property resource management. *Journal of Theoretical Politics* 4(3): 247-281.
- McKinsey & Company 2009 Pathways to a low-carbon economy. Version 2.0 of the global greenhouse gas abatement cost curve. McKinsey & Company. 190p.
- McShane, T. and Wells, M. (eds) 2004 *Getting biodiversity projects to work: towards more effective conservation and development*. Columbia University Press, New York. 464p.
- Mello, R. and Pires, E. C. S. 2004 Valoração econômica do uso de técnicas de prevenção e controle de queimadas em cenários de produção familiar na Amazônia: um estudo de caso em comunidades rurais de Paragominas, Pará, Brasil. IPAM/CSF/CI, Belém, Brazil.
- Méndez, F. and Sepúlveda, F. 2006 Corruption, growth and political regimes: cross country evidence. *European Journal of Political Economy* 22(1): 82-98.
- Mendonça, M. J. C., Vera-Diaz, M. C., Nepstad, D., da Motta, R. S., Alencar, A., Gomes, J. C. and Ortiz, R. A. 2004 The economic cost of the use of fire in the Amazon. *Ecological Economics* 49(1): 89-105
- Meridian Institute 2009a Reducing emissions from deforestation and forest degradation: an options assessment report. Prepared for the Government of Norway, by Angelsen, A., Brown, S., Loisel, C., Peskett, L., Streck, C. and Zarin, D. <http://www.REDD-OAR.org>.
- Meridian Institute 2009b REDD+ institutional options assessment. Prepared for the Government of Norway, by Streck, C., Gomez-Echeverri, L., Gutman, P., Loisel, C. and Werksman, J. <http://www.REDD-OAR.org>.

- Merry, F. D., Amacher, G. S., Pokorny, B., Lima, E., Scholz, I., Nepstad, D. C. and Zweede, J. C. 2003 Some doubts about concession in Brazil. *International Tropical Timber Organization Tropical Forest Update* 13(3): 7-9.
- Meyfroidt, P. and Lambin, E. F. 2009 Forest transition in Vietnam and displacement of deforestation abroad. *Proceedings of the National Academy of Sciences* 106(38): 16139-16144.
- Minang, P., McCall, M. and Bressers, H. 2007 Community capacity for implementing Clean Development Mechanism projects within community forests in Cameroon. *Environmental Management* 39(5): 615-630.
- Moeliono, M., Wollenberg, E. and Limberg, G. (eds) 2008 *The decentralization of forest governance: politics, economics and the fight for control of forests in Indonesian Borneo*. Earthscan, London.
- Monela, G. C., O'ktingati, A. and Kiwele, P. M. 1993 Socio-economic aspects of charcoal consumption and environmental consequences along the Dar es Salaam–Morogoro highway, Tanzania. *Forest Ecology and Management* 58(3-4): 249-258.
- Moore, H. and Vaughan, M. 1994 *Cutting down trees: gender, nutrition, and agricultural change in the Northern Province of Zambia*. Heinemann, Portsmouth, NH, USA.
- Munslow, B., Katerere, Y., Ferf, A. and O'Keefe, P. 1988 *The fuelwood trap. A study of the SADCC region*. Earthscan, London.
- MWLE 2002 National biomass study. Technical report. Forest Department, Ministry of Water, Lands and Environment, Kampala, Uganda. 118p.
- Nagendra, H. 2008 Do parks work? Impact of protected areas on land cover clearing. *AMBIO: A Journal of the Human Environment* 37(5): 330-337.
- Namara, A. and Nsabagasani, X. 2003 Decentralization and wildlife management: devolving rights or shedding responsibility? Bwindi Impenetrable National Park, Uganda. *Environmental Governance in Africa Working Paper No. 9*. World Resources Institute, Washington, DC.
- Namaalwa, J., Hofstad, O. and Sankhayan, P. L. 2009 Achieving sustainable charcoal supply from woodlands to urban consumers in Kampala, Uganda. *International Forestry Review* 11(1): 64-78.
- Naughton-Treves, L., Holland, M. B. and Brandon, K. 2005 The role of protected areas in conserving biodiversity and sustaining local livelihoods. *Annual Review of Environment and Resources* 30(1): 219-252.

- Nelson, A. and Chomitz, K. M. 2009 Protected area effectiveness in reducing tropical deforestation: a global analysis of the impact of protection status. Evaluation Brief 7. The World Bank, Washington, DC. 31p.
- Nelson, J. 2002 Building partnerships. United Nations, New York.
- Nepstad, D., Carvalho, G., Cristina Barros, A., Alencar, A., Paulo Capobianco, J., Bishop, J., Moutinho, P., Lefebvre, P., Lopes Silva, U. and Prins, E. 2001 Road paving, fire regime feedbacks, and the future of Amazon forests. *Forest Ecology and Management* 154(3): 395-407.
- Nepstad, D., Schwartzman, S., Bamberger, B., Santilli, M., Ray, D., Schlesinger, P., Lefebvre, P., Alencar, A., Prinz, E., Fiske, G. and Rolla, A. 2006 Inhibition of Amazon deforestation and fire by parks and indigenous lands. *Conservation Biology* 20(1): 65-73.
- Niles, J. O., Boyd, W., Lawlow, K., Madeira, E. M. and Olander, L. 2009 Experience on the ground, in the forests. International Forest Carbon and the Climate Change Challenge Series – Brief No. 6. Nicholas Institute, Duke University, Durham, NC, USA.
- Norris, R. (ed.) 2000 The IPG handbook on environmental funds: a resource book for the design and operation of environmental funds. Pact Publications, New York.
- Ntsebeza, L. 1999 Land tenure reform in South Africa: an example from the Eastern Cape Province. Issue Paper No. 82. Drylands Programme, International Institute for Environment and Development, London.
- Ntsebeza, L. 2002 Decentralization and natural resource management in rural South Africa: problems and prospects. Paper to the Conference on Decentralization and the Environment, Bellagio, Italy, 18-22 February 2002.
- Oleas, R. and Barragán, L. 2003 Environmental funds as a mechanism for conservation and sustainable development in Latin America and the Caribbean. http://www.conservationfinance.org/Documents/CF_related_papers/Diagnostic-English_13ago03.pdf (10 Nov. 2009).
- OSCE 2004 Best practises in combating corruption. Organization for Security and Co-operation in Europe, Vienna, Austria.
- Ostrom, E. 1990 Governing the commons: the evolution of institutions for collective action. Cambridge University Press, New York.
- Ostrom, E. 2003 How types of goods and property rights jointly affect collective action. *Journal of Theoretical Politics* 15(3): 239-270.
- Ostrom, E. 2005 Understanding institutional diversity. Princeton University Press, Princeton, NJ, USA.

- Ostrom, E. 2007 A diagnostic approach for going beyond panaceas. *Proceedings of the National Academy of Sciences* 104(39): 15181-15187.
- Ostrom, E. 2009 A general framework for analyzing sustainability of social-ecological systems. *Science* 325(5939): 419-422.
- Pacheco, P. 2003 Municipalidades y participación local en la gestión forestal en Bolivia. *In: Ferroukhi, L. (ed.) Gestión forestal municipal en América Latina*. CIFOR, Bogor, Indonesia.
- Pagiola, S. 2008 Payments for environmental services in Costa Rica. *Ecological Economics* 65(4): 712-724.
- Palm, C., Tomich, T., Van Noordwijk, M., Vosti, S., Gockowski, J., Alegre, J. and Verchot, L. 2004 Mitigating GHG emissions in the humid tropics: case studies from the Alternatives to Slash-and-Burn Program (ASB). *Environment, Development and Sustainability* 6(1): 145-162.
- Palmer, C. and Engel, S. 2007 For better or for worse? Local impacts of the decentralization of Indonesia's forest sector. *World Development* 35(12): 2131-2149.
- Parker, C. 2008 Co-benefits of the voluntary and compliance carbon markets. MSc Thesis, Imperial College, University of London, London.
- Parker, C., Mitchell, A., Trivedi, M. and Mardas, M. 2009 The little REDD+ book. Global Canopy Programme, Oxford, UK.
- Parsons, J. J. 1972 Spread of African pasture grasses to the American tropics. *Journal of Range Management* 25(1): 12-17.
- Pattanayak, S. K. 2009 Rough guide to impact evaluation of environmental and development programs. SANDEE Working Paper No. 40-09. South Asian Network for Development and Environmental Economics, Kathmandu, Nepal.
- Pattanayak, S. K., Wunder, S. and Ferraro, P. J. 2009 Show me the money: do payments supply ecosystem services in developing countries? Personal communication, November 2009.
- Pearce, D., Putz, F. E. and Vanclay, J. K. 2003 Sustainable forestry in the tropics: panacea or folly? *Forest Ecology and Management* 172(2-3): 229-247.
- Pedroni, L., Dutschke, M., Streck, C. and Porrúa, M. E. 2009 Creating incentives for avoiding further deforestation: the nested approach. *Climate Policy* 9(2): 207-220.
- Peluso, N. 1995 Whose woods are these? Counter-mapping forest territories in Kalimantan, Indonesia. *Antipode* 27(4): 383-406.
- Peña-Claros, M., Fredericksen, T. S., Alarcón, A., Blate, G. M., Choque, U., Leño, C., Licona, J. C., Mostacedo, B., Pariona, W., Villegas, Z. and Putz, F. E. 2008a Beyond reduced-impact logging: silvicultural

- treatments to increase growth rates of tropical trees. *Forest Ecology and Management* 256(7): 1458-1467.
- Peña-Claros, M., Peters, E. M., Justiniano, M. J., Bongers, F., Blate, G. M., Fredericksen, T. S. and Putz, F. E. 2008b Regeneration of commercial tree species following silvicultural treatments in a moist tropical forest. *Forest Ecology and Management* 255(3-4): 1283-1293.
- Peskett, L. and Harkin, Z. 2007 Risks and responsibility in reduced emissions from deforestation and degradation. *Forestry Briefing* 15. Overseas Development Institute, London. <http://www.odi.org.uk/resources/details.asp?id=426&title=risk-responsibility-reduced-emissions-deforestation-degradation>.
- Peskett, L., Huberman, D., Bowen-Jones, E., Edwards, G. and Brown, J. 2008 Making REDD work for the poor. Briefing paper prepared on behalf of the Poverty Environment Partnership (PEP). Overseas Development Institute, London.
- Pfaff, A., Robalino, J. and Sanchez-Azofeifa, G. 2008 Payments for environmental services: empirical analysis for Costa Rica. Terry Sanford Institute of Public Policy, Duke University, Durham, NC, USA.
- Pinard, M. A. and Cropper, W. P. 2000 Simulated effects of logging on carbon storage in dipterocarp forest. *Journal of Applied Ecology* 37(2): 267-283.
- Pinard, M. A. and Putz, F. E. 1996 Retaining forest biomass by reducing logging damage. *Biotropica* 28(3): 278-295.
- Pinard, M. A., Putz, F. E. and Licona, J. C. 1999 Tree mortality and vine proliferation following a wildfire in a subhumid tropical forest in eastern Bolivia. *Forest Ecology and Management* 116(1-3): 247-252.
- Pokorny, B., Sabogal, C., Silva, J. N. M., Bernardo, P., Souza, J. and Zweede, J. 2005 Compliance with reduced-impact harvesting guidelines by timber enterprises in *terra firme* forests of the Brazilian Amazon. *International Forestry Review* 7(1): 9-20.
- Porras, I., Grieg-Gran, M. and Neves, N. 2008 All that glitters: a review of payments for watershed services in developing countries. *Natural Resource Issues* No 11. International Institute for Environment and Development, London. 130p.
- Porter, G. and Young, E. 1998 Decentralized environmental management and popular participation in coastal Ghana. *Journal of International Development* 10(4): 515-526.
- Poteete, A. R. and Ostrom, E. 2004 Heterogeneity, group size and collective action: the role of institutions in forest management. *Development and Change* 35(3): 435-461.

- Project Catalyst 2009 Towards a global climate agreement. Synthesis Briefing Paper. Climate Works Foundation, San Francisco, CA. http://www.project-catalyst.info/images/publications/synthesis_paper.pdf. 35p.
- Pulhin, J., Larson, A. and Pacheco, P. In press. Regulations as barriers to community benefits in tenure reform. *In*: Larson, A., Barry, D., Dahal, G. R. and Colfer, C. J. P. (eds) Forests for people: community rights and forest tenure reform. Earthscan, London.
- Putz, F. E. and Redford, K. H. 2009 Dangers of carbon-based conservation. *Global Environmental Change* 19(4): 400-401.
- Putz, F. E., Dykstra, D. P. and Heinrich, R. 2000 Why poor logging practices persist in the Tropics. *Conservation Biology* 14(4): 951-956.
- Putz, F. E., Sist, P., Fredericksen, T. and Dykstra, D. 2008a Reduced-impact logging: challenges and opportunities. *Forest Ecology and Management* 256(7): 1427-1433.
- Putz, F. E., Zuidema, P. A., Pinard, M. A., Boot, R. G. A., Sayer, J. A., Sheil, D., Sist, P., Elias and Vanclay, J. K. 2008b Improved tropical forest management for carbon retention. *PLoS Biol* 6(7): 1368-1369.
- Raffles, H. 1999 Local theory: nature and the making of an Amazonian place. *Cultural Anthropology* 14(3): 323-360.
- Ranganathan, J., Daniels, R. J. R., Chandran, M. D. S., Ehrlich, P. R. and Daily, G. C. 2008 Sustaining biodiversity in ancient tropical countryside. *Proceedings of the National Academy of Sciences* 105(46): 17852-17854.
- RedLAC 2008 Measuring the impact of environmental funds on biodiversity: perspectives from the Latin America and Caribbean Network of Environmental Funds. The Latin American and Caribbean Network of Environmental Funds (RedLAC), Rio de Janeiro, Brazil.
- REM 2006 Rapport de l'observateur independant no. 31/OI/REM. Resource Extraction Monitoring (REM), Yaoundé, Cameroon.
- Repetto, R. and Gillis, M. (eds) 1988 Public policies and the misuse of forest resources. Cambridge University Press, Cambridge, UK. 432p.
- Resosudarmo, I. A. P. 2005 Closer to people and trees: will decentralization work for the people and forests of Indonesia? *In*: Ribot, J. C. and Larson, A. M. (eds) Democratic decentralization through a natural resource lens, 110-132. Routledge, London.
- Ribot, J. C. 2001 Integral local development: 'accommodating multiple interests' through entrustment and accountable representation. *International Journal of Agricultural Resources, Governance and Ecology* 1(3): 306-326.

- Ribot, J. C. 2002 Democratic decentralization of natural resources: institutionalizing popular participation. World Resources Institute, Washington, DC.
- Ribot, J. C. 2003 Democratic decentralisation of natural resources: institutional choice and discretionary power transfers in Sub-Saharan Africa. *Public Administration and Development* 23(1): 53-65.
- Ribot, J. C. 2004 Waiting for democracy: the politics of choice in natural resource decentralization. World Resources Institute, Washington, DC. 140p.
- Ribot, J. C. 2008 Building local democracy through natural resources interventions: an environmentalist's responsibility. A policy brief. World Resources Institute, Washington, DC.
- Ribot, J. C. 2009 Forestry and democratic decentralization in Sub-Saharan Africa: a rough review. *In: German, L., Karsenty, A. and Tiani, A. M. (eds) Governing Africa's forests in a globalized world*, 29-55. Earthscan, Washington, DC, and CIFOR, Bogor, Indonesia.
- Ribot, J. C. and Oyono, R. 2005 The politics of decentralization. *In: Wisner, B., Toulmin, C. and Chitiga, R. (eds) Toward a new map of Africa*, 205-228. Earthscan, London.
- Ribot, J. C. and Oyono, R. 2006 Introduction: decentralisation and livelihoods in Africa. *In: Ribot, J. C. and Oyono, R. (eds) African development , special issue, Implementing progressive new natural resources laws*, 1-19.
- Ribot, J. C., Agrawal, A. and Larson, A. M. 2006 Recentralizing while decentralizing: how national governments reappropriate forest resources. *World Development* 34(11): 1864-1886.
- Ribot, J. C., Cchatre, A. and Lankina, T. 2008 Institutional choice and recognition in the formation and consolidation of local democracy. *Conservation and Society* 6(1): 1-11.
- Rice, R. E., Gullison, R. E. and Reid, J. W. 1997 Can sustainable management save tropical forests? *Scientific American* 276(4): 44-49.
- Richards, M. 2000 Can sustainable tropical forestry be made profitable? The potential and limitations of innovative incentive mechanisms. *World Development* 28(6): 1001-1016.
- Richards, M. and Costa, P. M. 1999 Can tropical forestry be made profitable by internalizing the externalities? *ODI Natural Resource Perspectives* 46: 1-6.
- Richards, M., Wells, A., Del Gatto, F., Contreras-Hermosilla, A. and Pommier, D. 2003 Impacts of illegality and barriers to legality: a diagnostic analysis of illegal logging in Honduras and Nicaragua. *International Forestry Review* 5(3): 282-292.

- Robbins, P. 1998 Paper forests: imagining and deploying exogenous ecologies in arid India. *Geoforum* 29(1): 69-86.
- Roberts, D. 2009 Securing finance for biofuels – where is the money coming from? Presentation to the World Biofuels Markets Conference. Brussels, Belgium, 16–18 March 2009.
- Rock, M. T. and Bonnett, H. 2004 The comparative politics of corruption: accounting for the East Asian paradox in empirical studies of corruption, growth and investment. *World Development* 32(6): 999-1017.
- Rørstad, P. K., Vatn, A. and Kvakkestad, V. 2007 Why do transaction costs of agricultural policies vary? *Agricultural Economics* 36(1): 1-11.
- Ross, M. L. 2001 Timber booms and institutional breakdown in Southeast Asia. Cambridge University Press, Cambridge, UK.
- RRI 2008 Seeing people through the trees: scaling up efforts to advance rights and address poverty, conflict and climate change. Rights and Resources Initiative, Washington, DC.
- RRI and RFN 2008 Foundations for effectiveness: a framework for ensuring effective climate change mitigation and adaptation in forest areas without undermining human rights and development. Policy Brief. Rights and Resources Initiative, Washington, DC and Rainforest Foundation Norway, Oslo, Norway.
- Rudel, T. K. 2007 Changing agents of deforestation: from state-initiated to enterprise driven processes, 1970–2000. *Land Use Policy* 24(1): 35-41.
- Rudel, T. and Horowitz, B. 1993 Tropical deforestation: small farmers and land clearing in the Ecuadorian Amazon. Colombia University Press, New York.
- Rudel, T. K., Coomes, O. T., Moran, E., Achard, F., Angelsen, A., Xu, J. and Lambin, E. 2005 Forest transitions: towards a global understanding of land use change. *Global Environmental Change* 15(1): 23-31.
- Ruf, F. 2001 Tree crops and deforestation and reforestation agents: the case of cocoa in Côte d'Ivoire and Sulawesi. *In*: Angelsen, A. and Kaimowitz, D. (eds) *Agricultural technologies and tropical deforestation*, 291-315. CAB International, Wallingford, UK.
- Sabogal, C., Pokorny, B., Silva, N., Bernardo, P., Massih, F., Boscolo, M., Lentini, M., Sobral, L. and Veríssimo, A. 2006 Manejo florestal empresarial na Amazônia Brasileira. Restrições e oportunidades para a adoção de boas práticas de manejo. CIFOR, Belem, Brazil. 71p.
- Sachs, J. D. 2005 *The end of poverty: how can we make it happen in our life time?* Penguin Books, London.
- Salafsky, N. R., Margoluis, R. and Redford, K. 2001 Adaptive management: a tool for conservation practitioners. Biodiversity Support Program,

- Washington, DC. <http://www.worldwildlife.org/bsp/publications/aam/112/titlepage.htm> (12 Nov. 2009).
- Sander, K. and Zeller, M. 2007 Protected area management and local benefits: a case study from Madagascar. *In*: Tscharrntke, T., Leuschner, C., Zeller, M., Guhardja, E. and Bidin, A. (eds) *Stability of tropical rainforest margins*, 363-385. Springer, Berlin.
- Santilli, M., Moutinho, P., Schwartzman, S., Nepstad, D., Curran, L. and Nobre, C. 2005 Tropical deforestation and the Kyoto Protocol: an editorial essay. *Climatic Change* 71(3): 267-276.
- Sargent, C. and Bass, S. (eds) 1992 *Plantation politics – forest plantations in development*. Earthscan, London.
- Sarin, M., Singh, N., Sundar, N. and Bhogal, R. 2003 Devolution as a threat to democratic decision-making in forestry? Findings from three states in India. *In*: Edmunds, D. (ed.) *Local forest management: the impacts of devolution policies*, 55-126. Earthscan, London.
- Sasaki, N. and Putz, F. E. 2009 Critical need for new definitions of 'forest' and 'forest degradation' in global climate change agreements. *Conservation Letters* 2(5): 226-232.
- Saunders, J., Ebeling, J. and Nussbaum, R. 2008 *Reduced emissions from deforestation and forest degradation (REDD): lessons from a governance perspective*. Proforest, Oxford, UK. (Available from: www.proforest.net.)
- Schlager, E. and Ostrom, E. 1992 Property-rights regimes and natural resources: a conceptual analysis. *Land Economics* 68(3): 249-262.
- Schmitt, C. B., Burgess, N. D., Coad, L., Belokurov, A., Besançon, C., Boisrobert, L., Campbell, A., Fish, L., Gliddon, D., Humphries, K. *et al.* 2009 Global analysis of the protection status of the world's forests. *Biological Conservation* 142(10): 2122-2130.
- Schneider, V. 2003 Akteurskonstellationen und netzwerke in der politikentwicklung. *In*: Schubert, K. and Bandelow, N. C. (eds) *Lehrbuch der politikfeldanalyse*, 107-146. Oldenbourg, München, Germany.
- Schroeder, R. 1999 *Shady practices: agroforestry and gender politics in The Gambia*. University of California Press, Berkeley, CA, USA.
- Schulze, M., Grogan, J. and Vidal, E. 2008 Technical challenges to sustainable forest management in concessions on public lands in the Brazilian Amazon. *Journal of Sustainable Forestry* 26(1): 61-75.
- Schwartzman, S. 2009 *Brazil national and state REDD*. EDF Policy Brief. Environmental Defense Fund, New York. http://www.environmentaldefensefund.com/documents/10438_Brazil_national_and_state_REDD_report.pdf (13 Nov. 2009).

- Schwarze, R., Niles, J. O. and Olander, J. 2002 Understanding and managing leakage in forest-based greenhouse-gas-mitigation projects. *Philosophical Transactions of the Royal Society of London A* 360: 1685-1703.
- Scott, W. R. 1995 *Institutions and organizations*. Sage, Thousand Oaks, CA, USA.
- Scricciu, S. S. 2007 Can economic causes of tropical deforestation be identified at a global level? *Ecological Economics* 62(3-4): 603-612.
- Seymour, F. J. In press. Forests, climate change, and human rights: managing risks and trade-offs. *In: Humphreys, S. (ed.) Human rights and climate change*. Cambridge University Press, Cambridge, UK.
- Seymour, F. and Dubash, N. 2000 Right conditions: The World Bank, structural adjustment, and forest policy reform. World Resources Institute, Washington, DC. 156p.
- Shackleton, S. E. and Campbell, B. M. 2001 Devolution in natural resource management: institutional arrangements and power shifts. A synthesis of case studies from southern Africa. SADC Wildlife Sector Natural Resource Management Programme, Lilongwe, Malawi and WWF (Southern Africa), Harare, Zimbabwe.
- Shah, A. 2006 Corruption and decentralized public governance. World Bank Policy Research Working Paper No. 3824. The World Bank, Washington, DC.
- Shively, G. E. 2001 Agricultural change, rural labor markets, and forest clearing: an illustrative case from the Philippines. *Land Economics* 77(2): 268-284.
- Shively, G. and Pagiola, S. 2004 Agricultural intensification, local labor markets, and deforestation in the Philippines. *Environment and Development Economics* 9(2): 241-266
- Shrestha, R. A. M., Alavalapati, J., Seidl, A., Weber, K. and Suselo, T. R. I. 2007 Estimating the local cost of protecting Koshi Tappu wildlife reserve, Nepal: a contingent valuation approach. *Environment, Development and Sustainability* 9(4): 413-426.
- Sims, K. 2008 Evaluating the local socio-economic impacts of protected areas: a system level comparison group approach. Global Environment Facility Impact Evaluation Information Document No. 14. Global Environment Facility, Washington, DC.
- Sist, P. and Bertault, J.-G. 1998 Reduced impact logging experiments: impact of harvesting intensities and logging techniques on stand damage. *In: Bertault, J. G. and Kadir, K. (eds) Silvicultural research in a lowland mixed dipterocarp forest of East Kalimantan*, 139-161. Centre de coopération internationale en recherche agronomique pour le développement (CIRAD-Forêt), Montpellier, France.

- Skutsch, M. 2005 Reducing carbon transaction costs in community based forestry management. *Climate Policy* 5: 433-443.
- Skutsch, M., Karky, B., Zahabu, E., McCall, M. and Peters-Guarin, G. 2009a Community measurement of carbon stock change for REDD. *In: Collaborative Partnership on Forest, special study on forest degradation*. FAO, Rome
- Skutsch, M., Zahabu, E. and Karky, B. 2009b Community forest management under REDD: policy conditions for equitable governance. Paper prepared for the 13th World Forestry Congress: Forests in development, a vital balance. Buenos Aires, Argentina. 18-25 October 2009.
- Smith, J., Colan, V., Sabogal, C. and Snook, L. 2006 Why policy reforms fail to improve logging practices: the role of governance and norms in Peru. *Forest Policy and Economics* 8(4): 458-469.
- Smith, J., Obidzinski, K., Subarudi, S. and Suramenggala, I. 2003a Illegal logging, collusive corruption and fragmented governments in Kalimantan, Indonesia. *International Forestry Review* 5(3): 293-302.
- Smith, R. J., Muir, R. D. J., Walpole, M. J., Balmford, A. and Leader-Williams, N. 2003b Governance and the loss of biodiversity. *Nature* 426(6962): 67-70.
- Somanathan, E., Prabhakar, R. and Mehta, B. S. 2009 Decentralization for cost-effective conservation. *Proceedings of the National Academy of Sciences* 106(11): 4143-4147.
- Southgate, D. and Runge, C. F. 1990 The institutional origins of deforestation in Latin America. University of Minnesota, Department of Agriculture and Applied Economics, Staff Paper No. P90-5. University of Minnesota, St Paul, MN, USA.
- Southgate, D., Salazar-Canelos, P., Camacho-Saa, C. and Stewart, R. 2000 Markets, institutions, and forestry: the consequences of timber trade liberalization in Ecuador. *World Development* 28(11): 2005-2012.
- Souza, C., Firestone, L., Silva, L. M. and Roberts, D. 2003 Mapping forest degradation in the eastern Amazon from SPOT 4 through spectral mixture models. *Remote Sensing of Environment* 87: 494-506.
- Spergel, B. and Taieb, P. 2008 Rapid review of conservation trust funds. Conservation Finance Alliance, Washington, DC.
- Stern, N. 2006 *The Stern review: the economics of climate change*. Cambridge University Press, Cambridge, UK.
- Sunderlin, W., Hatcher, J. and Liddle, M. 2008a From exclusion to ownership? Challenges and opportunities in advancing forest tenure reform. Rights and Resources Initiative, Washington, DC.

- Sunderlin, W. D., Dewi, S., Puntodewo, A., Müller, D., Angelsen, A. and Epprecht, M. 2008b Why forests are important for global poverty alleviation: a spatial explanation. *Ecology and Society* 13(2): 24. <http://www.ecologyandsociety.org/vol13/iss2/art24/> (18 Nov. 2009).
- Sutter, C. 2003 Sustainability check-up for CDM projects. Wissenschaftlicher Verlag, Berlin.
- Tacconi, L. 2007a Decentralization, forests and livelihoods: theory and narrative. *Global Environmental Change* 17(3-4): 338-348.
- Tacconi, L. 2007b Verification and certification of forest products and illegal logging in Indonesia. *In: Tacconi, L. (ed.) Illegal logging: law enforcement, livelihoods and the timber trade.* Earthscan, London.
- Tacconi, L. (ed.) 2007c *Illegal logging: law enforcement, livelihoods and the timber trade.* Earthscan, London
- Tacconi, L., Boscolo, M. and Brack, D. 2003 National and international policies to control illegal forest activities. Report for the Ministry of Foreign Affairs, Government of Japan. CIFOR, Bogor, Indonesia.
- Tahmina, Q. A. and Gain, P. 2002 A guide to NGO–business partnerships. Society for Environment and Human Development, Dhaka, Bangladesh.
- Taylor, P. L. 2005 A fair trade approach to community forest certification? A framework for discussion. *Journal of Rural Studies* 21(4): 433-447.
- Tewari, A. and Phartiyal, P. 2006 The carbon market as an emerging livelihood opportunity for communities of the Himalayas. ICIMOD Mountain Development No. 49. Central Himalayan Environmental Association, Nainital, India. p. 26-27.
- TFF 2008 Tropical Forest Foundation News (spring 2008). http://www.tropicalforestfoundation.org/newsletters/newsletter2008_spring.pdf (16 Aug. 2008).
- The Nature Conservancy 2009 Submission to the United Nations Framework Convention on Climate Change regarding Views on issues relating to indigenous peoples and local communities for the development and application of methodologies for reducing emissions from deforestation and forest degradation in developing countries. <http://unfccc.int/resource/docs/2009/smsn/ngo/099.pdf>.
- Tieguhong, J. C. and Betti, J. L. 2008 Forest and protected area management in Cameroon. Tropical Forest Update 18/1. The International Tropical Timber Organization.
- Tole, L. 2001 Jamaica's disappearing forests: physical and human aspects. *Environmental Management* 28(4): 455-467.
- Tomaselli, I. and Hirakuri S. R. 2008 Converting mahogany. ITTO Tropical Forest Update 18/4

- Tomlinson, F. 2009. Do harvesting impacts determine patterns of non-forest vegetation in dipterocarp forest in Sabah 15 years post-logging? MSc Thesis, University of Aberdeen, Aberdeen, UK.
- Toni, F. 2006a Gestão florestal na Amazônia brasileira: avanços e obstáculos em um sistema federalista. CIFOR, Bogor, Indonesia and International Development Research Centre, Ottawa, Canada.
- Toni, F. 2006b Institutional choice on the Brazilian agricultural frontier: strengthening civil society or outsourcing centralized natural resource management? Paper to 11th Biennial Conference of the International Association for the Study of Common Property. Bali, Indonesia, 19-23 June 2006.
- Topp-Jørgensen, E., Poulsen, M. K., Lund, J. F. and Massao, J. F. 2005 Community-based monitoring of natural resource use and forest quality in montane forests and miombo woodlands of Tanzania. *Biodiversity and Conservation* 14(11): 2653-2677.
- Torres-Duque, C., Maldonado, D., Perez-Padilla, R., Ezzati, M., Viegi, G. and on behalf of the Forum of International Respiratory Societies Task Force on Health Effects of Biomass Exposure 2008 Biomass fuels and respiratory diseases: a review of the evidence. *Proceedings of the American Thoracic Society* 5(5): 577-590.
- Transparency International 2002 Corruption in South Asia: insights and benchmarks from citizen feedback surveys in five countries. Transparency International, Berlin.
- Treisman, D. 2007 What have we learned about the causes of corruption from ten years of cross-national empirical research? *Annual Review of Political Science* 10: 211-244.
- Tucker, C. 1999 Private versus common property forests: forest conditions and tenure in a Honduran community. *Human Ecology* 27(2): 201-230.
- Twidell, J. and Weir, T. 2006 Renewable energy resources. 2nd ed. Taylor and Francis, Oxford, UK. 601p.
- UNDP, UNEP, WB and WRI 2003 World resources 2002-2004: decisions for the Earth: balance, voice and power. United Nations Development Programme, United Nations Environment Programme, World Bank, World Resources Institute, Washington, DC.
- UNFCCC 2007 Reducing emissions from deforestation in developing countries: approaches to stimulate action. 2/cp.13. United Nations Framework Convention on Climate Change, Bonn, Germany.
- UNFCCC 2009a Article for the REDD+ mechanism. United Nations Framework Convention on Climate Change, Bonn, Germany. http://unfccc.int/files/kyoto_protocol/application/pdf/papuanewguinea070509.pdf (12 Nov. 2009).

- UNFCCC 2009b Cost of implementing methodologies and monitoring systems relating to estimates of emissions from deforestation and forest degradation, the assessment of carbon stocks and greenhouse gas emissions from changes in forest cover, and the enhancement of forest carbon stocks. Technical Paper FCCC/TP/2009/1. United Nations Framework Convention on Climate Change, Bonn, Germany. <http://unfccc.int/resource/docs/2009/tp/01.pdf>.
- UNFCCC 2009c Reordering and consolidation of text in the revised negotiating text. Advance version. 1F5C CSeCp/tAemWbGerL 2C0A0/92 009/INF.2. United Nations Framework Convention on Climate Change, Bonn, Germany.
- UN-REDD Programme 2009 Background analysis of REDD regulatory frameworks. The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, Geneva.
- van Noordwijk, M., Tomich, T. P., Winahyu, R., Murdiyarso, D., Suyanto, Partoharjono, S. and Fagi, A. M. 1995 Alternatives to slash-and-burn in Indonesia. Summary report of phase 1. ASB Indonesia Report 4. World Agroforestry Centre, Bogor, Indonesia.
- van Rouveroy van Nieuwaal, E. A. B. 1987 Chiefs and African states: some introductory notes and an extensive bibliography on African chieftaincy. *Journal of Legal Pluralism* (25 & 26): 1-46.
- Vatn, A. 2005 Institutions and the environment. Edward Elgar, Cheltenham, UK. 481p.
- Vatn, A., Vedeld, P., Petursson, J. G. and Stenslie, E. 2009 The REDD direction. The potential for reduced carbon emissions, biodiversity protection and enhanced development. A desk study with focus on Tanzania and Uganda. Noragric Report. Norwegian University of Life Sciences, Ås, Norway. 140p.
- Venkataraman, C., Habib, G., Eiguren-Fernandez, A., Miguel, A. H. and Friedlander, S. K. 2005 Residential biofuels in South Asia: carbonaceous aerosol emissions and climate impacts. *Science* 307(5714): 1454-1456.
- Verchot, L. and Petkova, E. 2009 The state of REDD negotiations: consensus points, options for moving forward and research needs to support the process. Unpublished manuscript. CIFOR, Bogor, Indonesia.
- Veríssimo, A., Cochrane, M. A. and Souza Jr, C. 2002 National forests in the Amazon. *Science* 297(5586): 1478.
- Villegas, Z., Peña-Claros, M., Mostacedo, B., Alarcón, A., Licona, J.C., Leño, C., Pariona, W. and Choque, U. 2009 Silvicultural treatments enhance growth rates of future crop trees in a tropical dry forest. *Forest Ecology and Management* 258(6): 971-977.

- von der Goltz, J. 2009 High stakes in a complex game: a snapshot of the climate change negotiating positions of major developing country emitters. Working Paper 177. Center for Global Development, Washington, DC.
- von Thünen, J. H. 1966 The isolated state. Wartenberg, C. M. trans. Translation of: *Der isolierte Staat* (1826). Pergamon Press, Oxford and New York. 304p.
- Vosti, S. A., Carpentier, C. L., Witcover, J. and Valentim, J. 2001 Intensified small-scale livestock systems in the western Brazilian Amazon. *In*: Angelsen, A. and Kaimowitz, D. (eds) *Agricultural technologies and tropical deforestation*. CAB International, Wallingford, UK.
- Wadsworth, F. H., Zweede, J. C. 2006 Liberation: acceptable production of tropical forest timber. *Forest Ecology and Management* 233(1): 45-51.
- Walker, P. and Peters, P. 2001 Maps, metaphors, and meanings: boundary struggles and village forest use on private and state land in Malawi. *Society and Natural Resources* 14: 411-424.
- Weber, E. 1998 *Pluralism by the rules: conflict and co-operation in environmental regulation*. Georgetown University Press, Washington, DC.
- Weinhold, D. and Reis, E. 2008 Transportation costs and the spatial distribution of land use in the Brazilian Amazon. *Global Environmental Change* 18(1): 54-68.
- Wells, M. 1991 Trust funds and endowments as a biodiversity conservation tool. Policy Research Working Paper No. 1991-26. Environment Department, The World Bank, Washington, DC.
- Wells, M. and Brandon, K. 1992 *People and parks: linking protected area management with local communities*. The World Bank, Washington, DC. 116p.
- Wells, M., Guggenheim, S., Khan, A., Wardojo, W. and Jepson, P. 1999 Investing in biodiversity. A review of Indonesia's integrated conservation and development projects. *Directions in Development*. The World Bank, Washington, DC.
- Wells, M. P., McShane, T. O., Dublin, H. T., O'Connor, S. and Redford, K. H. 2004 Do integrated conservation and development projects have a future? *In*: McShane, T. and Wells, M. (eds) *Making biodiversity projects work: towards more effective conservation*. Columbia University Press, New York.
- Wemaere, M., Streck, C. and Chagas, T. 2009 Legal ownership and nature of Kyoto units and EU allowances. *In*: Freestone, D. and Streck, C. (eds) *Legal aspects of carbon trading: Kyoto, Copenhagen and beyond*. Oxford University Press, Oxford, UK.

- Wertz-Kanounnikoff, S. and Kongphan-apidak, M. 2009 Reducing emissions from deforestation and forest degradation: a preliminary survey of emerging REDD demonstration and readiness activities. Working Paper. CIFOR, Bogor, Indonesia.
- White, A. and Martin, A. 2002 Who owns the worlds forests? Forest tenure and public forests in transition. Forest Trends and Center for International Environmental Law, Washington, DC.
- Wilson, E. 2009 Company-led approaches to conflict resolution in the forest sector. The Forest Dialogue, London.
- Wily, L. A. no date [c. 2000] Making woodland management more democratic: cases from eastern and southern Africa. Drylands Programme, International Institute for Environment and Development, London. Mimeo.
- Winders, W. 2009 The politics of food supply: U.S. agricultural policy in the world economy. Yale University Press, New Haven, CT, USA.
- Wittayapak, C. and Vandergeest, P. (eds) 2009 The politics of decentralization: natural resource management in Asia. Mekong Press, Chiangmai, Thailand.
- Wittman, H. and Caron, C. 2009 Carbon offsets and inequality: social costs and co-benefits in Guatemala and Sri Lanka. *Society and Natural Resources* 22(8): 710-726.
- Wollenberg, E., Anderson, J. and Edmunds, D. 2001 Pluralism and the less powerful: accommodating multiple interests in local forest management. *International Journal of Agricultural Resources, Governance and Ecology* 1(3/4): 199-222.
- Wollenberg, E., Moeliono, M., Limberg, G., Iwan, R., Rhee, S. and Sudana, M. 2006 Between state and society: local governance of forests in Malinau, Indonesia. *Forest Policy and Economics* 8(4): 421-433.
- World Bank 1997 World development report. Oxford University Press, New York.
- World Bank 2004 Sustaining forests: a development strategy. The World Bank, Washington, DC.
- World Bank 2006 Strengthening forest law enforcement and governance. Addressing a systemic constraint to sustainable development. Report No. 36638-GLB. The World Bank, Washington, DC. http://www.illegal-logging.info/uploads/Forest_Law_FINAL_HI_RES_9_27_06_FINAL_web.pdf.
- World Bank 2008a Capacity building. The World Bank Carbon Finance Unit, Washington, DC. <http://wbcarbonfinance.org/Router.cfm?Page=CapBuilding&ItemID=7> (12 Nov. 2009).

- World Bank 2008b The World development report 2007: agriculture for development. The World Bank, Washington, DC.
- World Bank 2009a Ease of doing business index. The World Bank, Washington, DC. <http://www.doingbusiness.org/EconomyRankings/> (12 Nov. 2009).
- World Bank 2009b Projects and operations: project portfolio advanced search. <http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,menuPK:51563~pagePK:95873~piPK:95910~theSitePK:40941,00.html> (22 Sep. 2009).
- World Bank 2009c World Bank poverty impact evaluations database. <http://go.worldbank.org/DOKOVUWXR0> (12 Nov. 2009).
- World Bank 2009d World development report 2009: reshaping economic geography. The World Bank, Washington, DC.
- World Bank 2009e Making smart policy: using impact evaluation for policy making, case studies on evaluations that influenced policy. Doing Impact Evaluation No. 14. The World Bank, Washington, DC.
- WRI 2000 A first look at logging in Gabon. A Global Forest Watch – Gabon Report. World Resources Institute, Washington, DC.
- WRI 2009 The duality of emerging tenure systems. World Resources Institute, Washington, DC. <http://www.wri.org/publication/content/8069> (1 Nov. 2009).
- Wunder, S. 2003 Oil wealth and the fate of the forest: a comparative study of eight tropical countries. Routledge, London.
- Wunder, S. 2005 Payments for environmental services: some nuts and bolts. CIFOR Occasional Paper No. 42. CIFOR, Bogor, Indonesia. 24p.
- Wunder, S. 2008 How do we deal with leakage? *In*: Angelsen, A. (ed.) Moving ahead with REDD: issues, options and implications, 65-75. CIFOR, Bogor, Indonesia.
- Wunder, S. and Albán, M. 2008 Decentralized payments for environmental services: the cases of Pimampiro and PROFAFOR in Ecuador. *Ecological Economics* 65(4): 685-698.
- Wunder, S., Campbell, B., Frost, P. G. H., Sayer, J. A., Iwan, R. and Wollenberg, L. 2008a When donors get cold feet: the community conservation concession in Setulang (Kalimantan, Indonesia) that never happened. *Ecology and Society* 13(1): 12.
- Wunder, S., Engel, S. and Pagiola, S. 2008b Taking stock: a comparative analysis of payments for environmental services programs in developed and developing countries. *Ecological Economics* 65(4): 834-852.
- Wünscher, T., Engel, S. and Wunder, S. 2008 Spatial targeting of payments for environmental services: a tool for boosting conservation benefits. *Ecological Economics* 65(4): 822-833.

- Xu, Z., Xu, J., Deng, X., Huang, J., Uchida, E. and Rozelle, S. 2006 Grain for green versus grain: conflict between food security and conservation set aside in China. *World Development* 34(1): 130-148.
- Yao, C. E. and Bae, K. 2008 Firewood plantation as an alternative source of energy in the Philippines. *Journal of Forest Science* 24(3): 171-174.
- Young, K. R. 1994 Roads and the environmental degradation of tropical montane forests. *Conservation Biology* 8(4): 972-976.
- Zahabu, E. 2008 Sinks and sources. PhD thesis, University of Twente, Enschede, The Netherlands.
- Zahabu, E., Malimbwi, R. and Ngaga, Y. 2005 Payments for environmental services as incentive opportunities for catchment forest reserves management in Tanzania. Paper to the Tanzania Association of Foresters Meeting. Dar es Salaam, Tanzania, 6–9 November 2005.
- Zarin, D. J., Schulze, M. D, Vidal, E. A., Lentini, M. 2007. Beyond reaping the first harvest: What are the objectives of managing Amazonian forests for timber production? *Conservation Biology* 21(4):916-925