

Forest Tenure and Multi-level Governance in Avoiding Deforestation under REDD+

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Introduction

As the first commitment period under the Kyoto Protocol comes to an end and parties to the United Nations Framework Convention on Climate Change (UNFCCC) struggle to broker a successor climate agreement, forests have become a major focal point in the battle against climate change. Storing more carbon than the global atmosphere, forests are powerful carbon sinks that play an important role as the “lungs of the world.” Yet global forest cover is dwindling rapidly as a result of deforestation and degradation. By releasing carbon into the atmosphere, these processes contribute significantly to climate change and account for between 12–15 percent¹ and 17 percent² of global greenhouse gas emissions. On top of this, the dieback of tropical forests also has a destabilizing effect on the global hydrological system and the earth system as a whole.³ For these reasons, creating an international mechanism to avoid deforestation has become increasingly imperative.

A global policy framework for Reducing Emissions from Deforestation and Forest Degradation (REDD+) is under negotiation as part of new agreement under the UNFCCC. Initially conceived as a scheme focusing narrowly on deforestation (RED), this framework has evolved over the past five years to include forest degradation (REDD), and to count rewards for enhancing carbon storage through forest restoration, rehabilitation and afforestation/reforestation (REDD+). At the December 2009 15th Conference of the Parties (COP-15) in Copenhagen and 2010 COP-16 in Cancun, parties agreed in principle on a REDD+ scheme. REDD+ features prominently in the non-legally binding

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1. Van der Werf et al. 2009.

2. Eliasch 2008.

3. Malhi et al. 2008.

Copenhagen Accord and Cancun Agreements, which acts as a placeholder until an agreement is reached.

The REDD+ framework under negotiation is underpinned by the idea that developing countries with substantial forest cover will take voluntary measures to halt or reduce domestic deforestation and claim compensation from industrialized countries for the carbon saved. REDD+ is in essence a financial mechanism which seeks to make forests more valuable standing than felled and is predicted to develop into a US\$10 billion market.⁴ The success of REDD+ thus hinges on whether it can channel large funds in such a way that deforestation activities become more costly than preservation activities, thereby ensuring that forests stay standing.

As well as sequestering carbon and contributing to a stable climate, forests play an important role for a range of different stakeholders, from national governments to local timber producers, to forest-dwelling indigenous tribes. REDD+ is thus as much about people as it is about forests. In this light, it is important to understand how a global framework, if it were primarily designed to curb carbon emissions, would affect the myriad other benefits that forests provide. The question of who owns, uses, and more importantly depends on the forest should therefore be at the heart of REDD+ in any of its current versions. These considerations have received scant attention within the formal policy process, yet they are becoming increasingly relevant as national strategies are developed and pilot projects are implemented on the ground.

This paper argues that tenure and how it is governed is of the utmost importance to an analytical understanding of REDD+ as well as to policy formulation. Since many of the world's tropical countries will participate in this global agreement, REDD+ will need to accommodate multiple and varied local tenure systems. In other words it must function effectively at all levels, from global to local, in order to succeed. This raises the important question of how diverse tenure systems can be adequately incorporated within a multi-level governance framework such as REDD+. At present, the dominant approach being advocated is to improve tenure security by harmonizing local tenure rules with national laws and the international framework, in part through formal recognition of the customary tenure systems governing forest use and access on the ground. We investigate the implications of this approach by drawing together existing knowledge and experience of forest tenure issues as they play out in real contexts, and evaluating their implications for REDD+. In particular, we challenge the prevailing argument that simply harmonizing different tenure systems will lead to improved tenure security and ensure that REDD+ does not disenfranchise local communities. By bringing to light the ways in which local tenure could shape the implementation of REDD+, we generate insights which can contribute to the design of a sustainable, effective and equitable REDD+ agreement.

4. Miles and Kapos 2008, 1454; and Angelsen et al. 2009.

The paper is organized as follows. The first section outlines the theoretical underpinnings of our argument and discusses how a multi-level governance perspective is used to analyse the issue of tenure and tenure security in REDD+. Section two discusses the issue of tenure in the context of broader government concerns. The third section presents an analysis of different tenure systems in place on the ground, and discusses how these systems address tenure security and what this means for REDD+. The analysis is followed by a discussion section which returns the tenure issue to a broader governance context and outlines key considerations for the design of a global REDD+ framework.

The Multi-level Governance of REDD+

While the benefits and challenges of different tenure systems are manifested locally, the decisions leading to the establishment of a given tenure arrangement are part of a process involving multiple institutional levels including local communities, national governments and under REDD+, international actors too. We take a multi-level governance perspective to discuss the issue of tenure for REDD+, as it foregrounds the vertical relationships between local forest tenure and a global forest agreement. According to Bulkeley and Betsill⁵, “taking a multi-level governance perspective entails engaging with the multiple tiers of government and spheres of governance” that contribute to shaping a particular issue. Multi-level governance has been applied to a variety of environmental contexts in an effort to recognize and foster the engagement of different actors in devising and delivering solutions to environmental problems including greenhouse gas emission reductions and the Clean Development Mechanism (CDM).⁶

Indeed as Skutch and Van Laake put it, reducing emissions from deforestation is by definition a multi-level, multi-actor issue.⁷ Given the multiple and varied uses of forests and the products and services they yield, it is difficult to find any social group without a stake in this future agreement. Local communities, the private forestry sector, national governments, international donors and timber consumers are all implicated in the future of forest governance under REDD+.

Yet the forest sector across the world is characterized by significant gaps between forest policies developed at national and international levels and their actual implementation on the ground.⁸ Failing to foster greater integration of initiatives under REDD+ could exacerbate these rifts. By foregrounding the vertical relationships between the local, national and international levels at play within REDD+, the multi-level governance perspective helps to highlight such

5. Bulkeley and Betsill 2005, 48.

6. See Bache and Flinders 2004; Gupta et al. 2007; Minang and McCall 2008; and Skutch and Van Laake 2009.

7. Skutch and Van Laake 2009.

8. Rametsteiner 2009, 113.

institutional gaps and provides a first step towards improving the connectivity between different levels.

In the context of REDD+, it is important not only to understand how best to mobilize different institutional levels to work together, but how best to meet the forest needs of different stakeholders from global to local. Humanity as a global stakeholder needs intact forests in order to avert dangerous climate change. At the same time, local stakeholders including indigenous and other forest dwelling communities need the forests for their daily subsistence and livelihoods.⁹

Given the tradition of top-down governance and treaty making on environmental issues, the risk is that REDD+ will prioritize the global set of claims and values to the detriment of local actors. With regard to the CDM, Boyd suggests that “local values appear to be closely associated with development and land tenure, jobs, autonomy and political leverage, while administrators and scientists lay claims to carbon and conservation.”¹⁰ If REDD+ is designed exclusively with the aim of meeting carbon sequestration objectives, local values and forest needs may be overlooked. Yet the adverse impacts that this could have on local actors could in fact compromise the overall effectiveness of REDD+. Securing local support and adherence to REDD+ will be necessary for REDD+ projects to succeed on the ground and for global objectives to be met. Greater attention to multiple levels within a multi-level governance framework could not only contribute to resolving competing claims over the resource,¹¹ but also improve the prospects for ensuring that all stakeholders can continue to access the resource to meet their needs.¹²

Forest Governance and Tenure

Given the impending challenge of brokering a post-2012 agreement, most of the issues under debate have focused on the international, methodological aspects of the policy design, arguably at the expense of other, equally important dimensions of the policy. Concerns over potential governance challenges, including the issue of tenure, have received significantly less attention on the official agenda.¹³ However, civil society and NGOs have been increasingly active in broaching governance issues and fostering the recognition that a global, carbon-based agreement such as REDD+ could compromise the lives and livelihoods of local, forest dependent communities.¹⁴

For this study, we define forest governance as the “the underlying actors, rules and practices that determine how decisions about forests are made.”¹⁵ As

9. Owubah et al. 2001.

10. Boyd 2006, 122.

11. For examples, see Hayes 2010; Lindyati 2003; and Anaya and Crider 1996.

12. Boyd 2006, 122.

13. Skutch and Van Laake 2009, 833.

14. Peskett et al. 2008.

15. Davis et al. 2009b, 4.

well as influencing how effective REDD+ is in reducing rates of deforestation, the governance mechanisms in place on the ground will have an important role to play in ensuring that REDD+ is equitable and “fair” in its local outcomes.¹⁶ Recognition of this has led to an increasing insistence on the need for “good governance” within the REDD+ debate.¹⁷ Forest tenure is a key governance issue. Defined by Cotula and Mayers as the “systems of rights, rules, institutions and processes regulating resource access and use,”¹⁸ tenure effectively determines who can own and use the forest, for how long, and under what conditions.¹⁹ Tenure thus contributes significantly to shaping the environmental, economic, social and cultural outcomes of particular systems of forest governance.

Historically, forest tenure has been dealt with at national or local level, within the specific socio-political and legal context of a country. When it is concluded, REDD+ will formally introduce an international layer to the governance of the carbon sink function of forests. In such a multi-level system, tenure will become an issue of global relevance. Thus far in the REDD+ negotiations, the tenure issue has been couched in normative calls for “good governance” and improved local tenure security. But what tenure security means and how it matters for REDD+ are questions that have not yet been adequately addressed.

For instance, the question of who owns the carbon saved by avoided deforestation will be largely determined by rules of tenure. In many countries including Bolivia and Papua New Guinea, the state owns all subsoil resources.²⁰ This has meant that despite being vested with recognized ownership of land and trees, local communities are still vulnerable to displacement and dispossession by officially sanctioned mining and other extractive activities. If local communities cannot lay claim to the carbon absorbed by forests on their land, there is a real risk that governments seeking to profit from REDD+ funds will exploit community lands for their own gains, to the detriment of local livelihoods.

REDD+ presents new challenges for how we understand local tenure and resource access because it provides an international, political recognition of the global claim to the world’s forests for their carbon sequestration capacity. This creates a tension between the global nature of REDD+ and the local nature of tenure which is not easily resolved, especially since as Minang and McCall point out, “little research has been addressed towards the local implementability of globally negotiated environmental policies.”²¹ This tension emerges from a lack of vertical coordination and harmonization of measures across levels of governance as well as from the difficulty of overcoming this gap given that international policies may often have a symbiotic relationship with national policies but not with local policies.²²

16. Hatcher and Bailey 2009.

17. See for instance Davis et al. 2009a; Griffiths 2007; Skutch et al. 2008; Lawlor et al. 2009; and CONFENIAE 2009.

18. Cotula and Mayers 2009, 3.

19. Romano 2007, 7.

20. Taylor 2006; and Armitage 2001.

21. Minang and McCall 2008, 845.

22. Gupta et al. 2007.

Tenure Systems Analysis

In view of the evolving REDD+ mechanism, the issue of forest tenure is being approached with an emphasis on the need to “improve tenure security,” largely by recognizing customary property arrangements and harmonizing statutory and customary systems. This section examines the meaning and implications of this approach through a review and analysis of current thinking on tenure issues in the context of forest governance. Given the scarcity of literature dealing specifically with REDD+, the following draws from different bodies of scholarship that offer insights on these issues. These include common-property and commons research, property rights theories and literature on community-based resource management.

Statutory vs Customary Tenure

Statutory and customary systems operate simultaneously in most developing countries and a rich body of literature has emerged analysing the interaction between them in different geographical contexts.²³ Being predicated on wholly different notions of ownership, these two systems have historically tended to either ignore one another or clash.

Statutory tenure arrangements are codified in domestic law and enforceable by national governments. Many of the statutory systems currently in place in developing countries are vestiges of the formal arrangements established by colonial governments.²⁴ These are based on notions of individual property rights where ownership is understood to be absolute and exclusive.²⁵ Under private ownership, comprehensive decision-making authority is vested in the owner²⁶ who can sell property as an asset on the market.²⁷

In contrast, customary arrangements are generally crafted at the local level, binding individual members of a community, and tend not to have a formal basis in law.²⁸ Customary systems are typically characterized by informal norms and oral agreements about resource ownership, access and use. These systems are primarily found in the rural regions of developing countries and have their roots in the traditional institutions and practices of indigenous populations. In the Democratic Republic (DR) of Congo for instance, despite all land being vested in the state under statutory law, Pygmy communities inhabiting the forest live according to customary rules where ownership is understood to be collective and where responsibility for the land is shared.²⁹ Similarly, local customary tenure arrangements governing forest access and use in Cameroon,³⁰

23. For instance see Unruh 2008; Platteau 1996; Saunders et al. 2002; and Lavigne Delville 2000.

24. Bruce 1998.

25. Fitzpatrick 2005; and Saunders et al. 2002.

26. Paavola 2008.

27. Cole 2002.

28. Talwar and Ghatge 2003.

29. See Hoare et al. 2008; Musafiri 2008; and Barume 2000.

30. See Tonye et al. 1993; and Egbe 2001.

Malawi³¹ and many other African countries are not formally recognized in the national statutory systems.

Notions of Ownership

In customary systems ownership is understood much more broadly than in statutory systems and is often shared between group members, under common-property arrangements.³² It is generally determined by occupancy, use, lineage and other longstanding rights,³³ and is both temporally and spatially dynamic. Unlike private property rights, collective ownership creates inalienable or non-transferable rights to access, use, withdraw, manage and exclude others from the resource. Customary tenure rules operate outside of the formal legal system and have "no concept of absolute title, property or ownership."³⁴ Such systems have been well documented in common-property scholarship,³⁵ which emphasizes in particular the diversity and complexity that characterize them.

Besides being structured around different notions of ownership, statutory systems and customary systems are fundamentally differentiated by the respective ways in which they create and enforce rules. Statutory rules are legally defined, codified and enforced by a third party or sanctioned authority through penalties, due process and compensation. The principles underlying statutory modes of tenure derive from notions such as citizenship and constitutional rights, where property is allocated by means of titles and ownership is formally registered.³⁶ In contrast, customary rules are socially defined and therefore far more dynamic and evolving. The community of resource users generally performs all the tasks relating to tenure without the separation of powers present in statutory systems.³⁷ Thus community members will participate in collective decision-making while simultaneously taking on exclusion and monitoring responsibilities.

Typology of Tenure Arrangements Under Statutory Law

The following typology represents the formal categories commonly employed to describe forest tenure arrangements under statutory law. While these terms are increasingly contested for their limited ability to capture the reality of tenure on the ground,³⁸ they are presented here because they are still dominant in the

31. Hansen 2005.

32. Fitzpatrick 2005.

33. Unruh 2008, 701.

34. Lyster 2010, 37.

35. Baland and Platteau 1996; Ostrom 1990; Agrawal 2001; McKean 2000; and Bromley and Cernea 1989.

36. Cotula, Toulmin, and Hesse 2004.

37. Paavola 2008.

38. See especially McKean 2000; Agrawal 2001, 2002, 2007; Bray et al. 2006; and White and Martin 2002.

academic literature, as well as in official data and policy documents. Given the diverse and dynamic nature of customary systems, they do not lend themselves to categories and typologies. As such they are not presented in this format, but rather discussed in detail in the subsequent sections.

Public Forests—State Owned, State Administered: State ownership over forests has its roots in medieval Europe, where rulers would “exclude commoners and la[y] claim to forest” to serve the interest of the crown.³⁹ In fact, state-centred and bureaucratic control over natural resources date back to England in the 13th Century with the Forest Charter, which legalized forest enclosure under Henry III, and France, where the 1699 Colbert ordinance enacted a vision of the forest as a “precious and noble resource, whose management needed to be rationalised for the nation’s common good, even if at the expense of local subsistence-related uses.”⁴⁰

The ideology that it was the state’s role to preserve and manage forests was transported to the colonies in the sixteenth and seventeenth centuries and entrenched in national forest codes (eg. French Forest Code 1827). Colonial powers consolidated their hold on newly acquired natural resources and usurped ownership rights from local communities, households and families.⁴¹ In Sri Lanka (1840) and Indonesia (1811) for instance, the British and Dutch administrations respectively enacted ordinances vesting the proprietary rights of land and forests to the British or Dutch sovereign. India, Nepal, Malaysia, the Philippines and other countries have similar colonial histories, which abolished local land rights over forest resources.⁴²

Colonial and newly independent governments thus nationalized the forests and gave state agencies authoritative rights to administer and manage them. Practices such as enclosure and scientific forestry, that had been applied in European contexts, were imposed on colonial forests, often disregarding the traditional customary land claims and practices of indigenous forest dwellers.⁴³ In Kenya for instance, the colonial government initially confined the indigenous populations to reserves, dispossessing them of their land and devoting it to agricultural production.⁴⁴ In general colonial settlers could legitimately claim ownership rights to forestland that they had cleared. As a result of this “clearing to claim” process,⁴⁵ large-scale deforestation began and indigenous forest dwellers were expelled from their traditional lands.

State ownership is the prevalent form of tenure across tropical countries, with an estimated 77 percent of the world’s tropical forests presently owned by

39. White and Martin 2002, 2.

40. Finger-Stitch and Finger 2003, 14.

41. Banerjee 1997.

42. Lynch and Talbot 1995.

43. Humphreys 2006.

44. Cotula, Toulmin, and Hesse 2004, 9.

45. Williams 2008.

governments.⁴⁶ In countries such as Cameroon, DR Congo, the entire national forest estate formally belongs to the state.

Public Forests—State Owned, Community Administered: This category of land is formally owned by the state, but reserved for use by local communities and indigenous peoples, typically on a semi-permanent and conditional basis.⁴⁷ As White and Martin explain, governments retain eminent domain over these lands, such that they are entitled to unilaterally terminate local community rights over large areas of their ancestral lands.⁴⁸ Local communities using this land do not generally have the right to sell or transfer land in return for payment. Rather their sole rights relate to use and management of the resource, and even these do not always have a formal basis in law. Since they lack ownership, communities on these lands are forced to negotiate their ability to access forest resources with the state or other owner. As Larson et al. indicate, local populations are often in competition with logging companies lobbying for access to the same resources.⁴⁹ On these lands, the distribution of rights between state and local community is neither clear nor stable.

Private Forests—Community Owned, Community Administered: In contrast to community reserves on public forests, private ownership by local groups and indigenous peoples is statutorily entrenched and endows them with a more secure set of rights. In principle, communities have comprehensive rights to access, manage, sell or alienate, withdraw resources and exclude outsiders from their land.⁵⁰ On one hand, communities under this tenure arrangement have considerable leverage when it comes to negotiating with governments or other stakeholders in decision-making over land use.⁵¹ In a project supported by the MacArthur Foundation in 2004, forest land was allocated to local communities in the Phong Dien Nature Reserve of Thua Thien Hue Province, Vietnam. In this pilot case, granting communities allocation, planning, surveying and enforcement rights and responsibilities based on customary norms and practices produced positive outcomes for these forest-dependent communities. Most notably, illegal logging and farming activities were monitored and reduced with no government spending.⁵²

However, in many cases, the rules governing such tenure arrangements are inconsistently applied and the alleged rights of local communities are frequently ignored. Wily's review of community owned forests in Africa suggests that generally, communities are "less decision-makers than consulted stake-

46. Cotula and Mayers 2009.

47. Hatcher and Bailey 2009.

48. White and Martin 2002, 4; and Essama-Nssah and Gockowski 2000.

49. Larson et al. 2007, 256.

50. Hatcher and Bailey 2009, 9.

51. White and Martin 2002.

52. Nguyen, Nguyen, and Vu 2008, 30.

holders; less regulators than rule followers; less a licensing authority than licensees; and less enforcers than reporters of offences to government."⁵³ Despite being tenure secure under statutory law, this land remains subject to decision-making by the state.

Private Forests—Firm or Individual Ownership and Administration: In tenure arrangements where individuals or firms have private ownership over an area of land, ownership rights cannot be unilaterally extinguished by the state without due process or compensation. Private ownership can apply to many different actors including families, communities or transnational actors.⁵⁴ This type of private ownership is not very common in the developing world, with only 13 per cent of the world's 40 most forested tropical countries being owned by individuals or firms.⁵⁵

The Importance of Local Tenure Security

This section addresses the importance of local tenure security for forest preservation and in what ways it can contribute to more sustainable forest governance and a more effective REDD+ agreement.

Tenure as an Incentive: An important argument emerging from the literature on common-property research is that secure tenure provides incentives for sustainable forest use and conservation, and encourages communities to take a long-term approach to resource management. For instance, the Food and Agriculture Organization (FAO) has recorded cases of Tanzanian communities with secure tenure rights cordoning off degraded areas from any use in order to let it recover.⁵⁶ Similarly, local communities in Honduras and Mexico have successfully self-organized to expel illegal loggers without the support of government agencies.⁵⁷ As Wily argues, where ownership of a resource is clear and secure, local custodianship will be more rooted and consequently more long lasting.⁵⁸ This has several important implications for REDD+.

First, in the context of carbon sequestration initiatives, having a vested interest in the land means that communities also have a stake in the forestry project. As Boyd et al. note in the context of the CDM, "local people with a stake in the project are likely to ensure against encroachment by outsiders, monitor against pests and fire, illegal harvest and social unrest."⁵⁹ Conversely, where tenure is insecure, communities do not have a formally recognized stake, and are

53. Wily 2004, 217.

54. Humphreys 2006.

55. Hatcher and Bailey 2009, 13.

56. FAO 2001, 129.

57. Kaimowitz 2003, 208.

58. Wily 2004, 219.

59. Boyd et al. 2007, 255.

therefore less likely to adopt a long-term and sustainable approach to resource governance. In a study of five Ugandan forests, Banana and Gombya-Ssembajjwe demonstrate that forests fare significantly better in areas under secure local tenure regimes.⁶⁰ Given that carbon storage is a long-term project, matching local timescales to global timescales in this way could significantly contribute to achieving permanent and ongoing carbon savings.

Second, securing customary tenure could provide a way of capitalizing on the benefits of common-property systems.⁶¹ Such systems are argued to be more effective at sustainably governing forest resources than state or market regulation, primarily because the collective nature of decision-making under these systems tends to produce decisions that are beneficial to all group members.⁶² It is not so much that forest communities are less willing than the state or other actors to see forests felled, alienated or depleted, but rather that forest clearing is rarely in the collective interest of the group. This is because of the multiple values and functions of forests for local community livelihoods (including watershed protection and non-timber forest products (NTFPs), for instance), and the fact that all of these can be compromised by deforestation. Consequently, formal and especially conscious⁶³ ownership under customary, common-property systems has the potential to ensure that more trees stay standing.

Third, with secure tenure comes the stream of benefits generally associated with private property rights. Under statutory ownership, forests participating in REDD+ become capital assets, which must be maintained in order for them to continue to generate benefits. This is crucial in the context of REDD+, where financial benefits will accrue from the carbon sequestered by forests. REDD+ will create a form of property right commodifying carbon for trade in which the owner of those rights will receive compensation. There is as yet no clarity on who will be vested with carbon rights under REDD+. Two options under discussion are (1) registration on the land, whereby landowners would receive compensation for reductions and be liable for re-emissions, or (2) nationalization, where ownership rights and liability are vested in the government.⁶⁴ However, the latter approach was implemented in New Zealand in 2002, and it received strong opposition from the forest industry, as well as contributing to a decline in the establishment of plantations. In 2007, the policy was reversed, and rights and liabilities were devolved back to forest owners under a new emissions trading scheme.⁶⁵

Tenure vs Financial Compensation: The above points all reveal the fundamental role of tenure in creating incentives to preserve and sustainably manage the for-

60. Banana and Gombya-Ssembajjwe 2000, 88.

61. See Wade 1987; Agrawal 2001; Bromley 1992; McKean 2000; Ostrom 1999; and Gibson et al. 2000.

62. Dasgupta and Beard 2007; Ostrom 1990; and Schlager and Ostrom 1992.

63. Wily 2004, 219.

64. Cotula and Mayers 2009; and Sunderlin et al. 2008.

65. Peskett and Harkin 2007, 5.

est. As Godoy et al. argue, "... governments, international donors and conservation agencies ought to defend the land rights of [local] people with more vigour if they wish to enhance conservation."⁶⁶ A further insight drawn from the literature on common-property and community-based conservation is that secure tenure creates stronger incentives to conserve than any other form of incentive.⁶⁷ Many forest conservation efforts⁶⁸ have been based purely on economic incentives, which provide financial compensation to local communities for their conservation activities. However according to Berkes and others an understanding of local incentives strictly in terms of financial benefits to the community is "too narrow, too simplistic and potentially counterproductive."⁶⁹

In the first place, flows of funds to remote forest communities are at risk of being captured by local elites. Development projects have shown that even where projects aim to compensate the whole community, simply channelling funds to a group often results in greater inequity in the distribution of both power and assets.⁷⁰ This both dissipates the incentive to conserve and exacerbates inequity and poverty. Second, scholars have suggested that rural communities—particularly remote ones—rarely equate benefits simply with money. Rather, they tend to conceive of benefits in social and political terms.⁷¹ Thus for rural communities, the incentive to sustainably use and safeguard the forest is not the financial gain, but the enhanced ability to "take control of their own lands and secure a better livelihood."⁷²

While this is not to undermine the place of economic incentives in REDD+, it strengthens the idea that establishing property rights for local communities is likely to provide more appropriate local incentives, which in addition to protecting forests would also contribute to improving local livelihoods. By promoting equity and empowerment, and capitalizing on the benefits of common-property systems, secure local tenure could better mobilize local communities for successful conservation.

The Challenge of Formalizing Customary Tenure

The above suggests that local tenure security can have positive impacts for the social and environmental outcomes of REDD+. However, improving tenure security and recognizing customary systems are significant challenges which may hinder rather than help the implementation of REDD+.

The disconnect between statutory and customary tenure systems has long been of concern to scholars and policymakers in developing countries. Lack of recognition of customary tenure has compromised many development initia-

66. Godoy et al. 1998, 169.

67. See especially Ostrom 1999.

68. See McNeely 1998.

69. Berkes 2004, 627.

70. Sandler 1992; Platteau 2004; and Dasgupta and Beard 2007.

71. See Berkes 2004; and Boyd 2006, 122.

72. Chambers 1983, 11.

tives and harmonizing these two systems is not as simple as granting customary systems legal title. In most cases, customary systems will predate new laws emanating from the state and will be viewed as more legitimate.⁷³ This is particularly true in contexts where the state has a weak capacity to enforce its own rules. Even when there are benefits to be gained by local communities in accepting new laws, the benefits of their customary systems are instantly tangible and understood. Consequently, any new laws applied may not enjoy recognition by local communities.⁷⁴

Tenurial Pluralism in Practice: The problem of formalizing customary laws is complicated by the fact that by definition, customary tenure arrangements are extremely specific to the particular local community, indigenous group and geographic location in which they exist. As such, there are a multitude of different customary tenure arrangements “on the ground” within most developing countries, in addition to the statutory system which may be in place at the national level. As Unruh states, tenurial pluralism means there are a range of different understandings of “what law applies to whom, when and how,”⁷⁵ which co-exist outside of the statutory system. Lavigne-Delville suggests that even within one village, different tenure rules may govern separate areas of land.⁷⁶ The multiplicity of tenure modes operating in one country render local tenure extremely insecure, with no clear set of norms and principles that can support a given claim to land. And in the face of such diversity, the obstacles to formalizing even a small subset of the systems in place become apparent.

Yet even if formalizing customary systems were technically feasible, the resulting laws would be so far removed from local practice that they would have little resonance with local people and would likely not be observed. For harmonization to succeed, new laws must have meaning for the local people concerned. Given the sheer number of different customary structures that coexist in tropical forests, it would be nigh on impossible to formalize one group’s rules, or a combination of different groups’ rules to produce a meaningful, widely regarded, uniform and operable set of rules.⁷⁷ In Uganda for instance, customary tenure was formally recognized in 1995, enabling registration of collectively held land as private property. Ten years later, not a single community certificate had been issued by the state.⁷⁸ This illustrates the fact that if communities do not fully understand and legitimate state laws, efforts to grant legality to customary systems can be wholly undermined. Any translation of local reality into formal law must therefore continue to have meaning in customary law. From this perspective, calls for recognition of customary tenure and common-property structures in the context of REDD+ appear somewhat superficial.

73. Unruh 2008.

74. Agrawal 2002; and Ostrom 1990.

75. Unruh 2008, 702.

76. Lavigne Delville 2000.

77. Fitzpatrick 2005.

78. Wily 2004, 224.

The challenges of formalizing customary systems have been encountered by many tropical countries in the last thirty years, as there has been a wave of reforms in the forest sector which have included attempts to grant greater recognition to the customary systems that effectively govern forest use and access on the ground.⁷⁹ Laws protecting customary rights and enabling their registration have been enacted as part of reforms in a number of countries (Uganda's Land Act 1998; Tanzania's Land Act and Village Act 1999; Namibia's Communa; Reform Act; Mozambique's Land Act 1997).

But a closer look at some of these reforms reveals that even if the challenge of crafting appropriate and widely legitimated laws could be overcome, a set of much more practical obstacles to formalizing customary law present themselves. In many tropical countries, reforms have sought to bring customary lands into the statutory systems through enhanced registration and titling programmes. However land registration is costly, lengthy and highly bureaucratic. Legal land ownership is made even more inaccessible by the fact that title registration can generally only be done in urban centres, as well as the high level of illiteracy among rural populations.⁸⁰ As a result few communities are able to acquire private ownership and they remain, at best, "custodians" rather than owners of their traditional lands. Many of the reforms aimed at improving customary tenure security have been, as Hatcher and Bailey put it, "plagued by slow progress, low levels of genuine local control and elite, or even corporate capture."⁸¹ Furthermore, lack of strong enforcement and dispute resolution mechanisms further complicate the process of formalizing customary systems, since they are necessary to uphold laws and rights.

The challenges and obstacles to formalizing customary tenure arrangements suggest that perhaps harmonization is not the best path towards ensuring tenure security for an effective and sustainable REDD+. As Unruh puts it, "a degree of benign neglect can be an important aspect of [customary] forms of practical governance."⁸² He argues that in Africa, many local communities actively seek to avoid entering into a land system backed by government. It is well known that many developing country governments engage in illegal forest activities that harm local communities,⁸³ and consequently many local groups are keen to preserve their anonymity as a form of protection from their governments. Furthermore, as Ribot and Peluso suggest, even where tenure is guaranteed by government either through land titling or secure usufruct rights, "forest-dependent people are not necessarily able to fully access the benefits of forest resources."⁸⁴

79. Mbile et al. 2009; Topa et al 2009; Counsell 2006; Cotula and Mayers 2009; Taylor 2006; and Pacheco 2006.

80. Hoare et al. 2008.

81. Hatcher and Bailey 2009, 33.

82. Unruh 2008, 702.

83. Kaimowitz 2003.

84. Ribot and Peluso 2003.

Plural Notions of Ownership and Tenure Security: Returning these arguments to the context of REDD+, what emerges from this analysis is a tension between the benefits that improved local tenure security could provide for successful forest governance under REDD+, and the challenges and realities of enhancing tenure security for local communities on the ground. Tenure security can act as a powerful incentive for sustainable and equitable forest governance, but the difficulty of granting that security to a multitude of customary, collective tenure regimes under a global framework is such that it may actually weaken the outcomes of REDD+.

This tension reveals a crucial distinction between what “secure tenure” means in statutory systems and what it means in customary systems. Attempts to formalize customary, common-property systems are in effect attempts to impose a statutory definition of secure tenure on local communities through property rights, bringing them into the ambit of formal, legal tenure systems. Yet as Unruh remarks, “traditional systems provide security of tenure in culturally relevant ways.”⁸⁵ Even if customary communal rights are not legally sanctioned, they may nonetheless provide local people with a form of tenure security. What matters is that they are backed and enforced by local authorities and enjoy widespread recognition among community members.⁸⁶ “Legal ownership, tenure and title” Ribot suggests, “are just a few mechanisms among many that people use to support their ability to benefit.”⁸⁷

The tension between these competing notions of tenure and ownership constitute a significant challenge for REDD+. Since REDD+ is essentially predicated on market-based notions of statutory rights and private ownership, there is a real risk that simply formalizing customary tenure will not yield the positive outcomes that many commentators have predicted. Ideally, it is not so much a harmonization of the rules that is required but rather harmonization in the divergent ways in which “tenure security” is understood. In one of the earliest papers exploring the potential of carbon forestry, Makundi stated that “land tenure and law may prove to be the strongest hindrance in implementing mitigation [efforts].”⁸⁸ This section has attempted to illustrate that over ten years later and in the new context of REDD+, this statement still holds true.

Discussion

Formalizing customary tenure is a long and complex process which does not always guarantee that local livelihoods and forest resources will be protected from deforestation. In many tropical countries, conflicting ownership claims persist and weak enforcement and conflict resolution mechanisms undermine the tenure security afforded by legalized customary rights. The challenges and pitfalls

85. Unruh 2002, 276.

86. Heltberg 2002, 206.

87. Ribot 1998, 312.

88. Makundi 1998, 10.

of simply formalizing local forest ownership suggest that in reality, tenure security is defined by much more than just ownership.

Tenure fits into a broader governance context in which transparent and accountable decision-making, monitoring, enforcement, benefit sharing and conflict resolution all play a key role. Indeed these emerge as major obstacles to securing local tenure and protecting forests in many deforesting countries around the world. Thus while much of the emphasis in the REDD+ tenure debate is on enhancing the tenure rights of local communities, this cannot be achieved without first strengthening national and local institutional capacity so that the set of interlocking governance mechanisms necessary to meet environmental and social objectives are present and functioning. The very funds generated by REDD+ could be directed towards improving institutional capacity and empowering local people, for instance by assisting communities with the costs and challenges of registering for land titles, or by enhancing the monitoring and enforcement capacities of municipal governments.

Historical, legal and political contexts will also shape the way REDD+ is implemented nationally and will impact its success on the ground. Some contexts may prove to be enabling, such as for instance in Bolivia, where significant work has already been done to safeguard local land rights at the national level which could potentially facilitate REDD+ implementation, benefit sharing and carbon sequestration. On the other hand, in a war-torn country such as DR Congo where land ownership is unclear and contentious, tenure changes could spark serious conflicts⁸⁹ making REDD+ much harder to implement.

Examining all these issues from a multi-level governance perspective highlights the fact that as a global framework, REDD+ has the potential to either exacerbate existing problems or contribute to resolving them. If existing development challenges such as elite capture, corruption and lack of accountability are not addressed within REDD+, the influx of funds could create perverse incentives and deepen economic and social inequity. As previously discussed, equity and social well-being play a central role in ensuring successful governance of natural resources. Misappropriation of REDD+ funds and the implications for local communities would have adverse impacts on forests, which in turn would seriously compromise efforts to mitigate climate change.

Yet if REDD+ is designed, implemented and monitored with all these issues in mind, it could serve as a driver for both social and environmental improvement. With regards to tenure, the multi-level nature of REDD+ can contribute to fortifying local tenure to improve livelihoods and avoid deforestation.

For instance, a global REDD+ framework could mandate certain requirements relating to the involvement of local communities. If it fosters greater local participation in the design of a global framework, REDD+ could provide a new opportunity for local communities to have an enhanced role in establishing tenure arrangements at a national level. This would result in more vertically in-

89. Musafiri 2008.

tegrated forest governance arrangements which in turn would ensure that each stakeholder group from the global to the local level can continue to derive the benefits they need from the forest.

REDD+ could also provide an information-sharing platform for local and national issues including tenure. Different political, historical and social contexts mean that prospective REDD+ countries have all acquired different experiences with tenure and forest governance which can be shared in the interest of making national policies more suited to REDD+. This can be particularly fruitful for countries with similar environmental, historical and legal contexts such as DR Congo and Cameroon for instance. While regional alliances such as COMIFAC (Central African Forests Commission) already act as knowledge-sharing platforms, a global network could have more far reaching benefits. The resources generated from REDD+ could also be used to strengthen existing institutional mechanisms and platforms such as COMIFAC at multiple levels. In this way, REDD+ could enhance the governance capacity of each institutional level under an overarching framework and ensure the vertical integration of REDD+ related policies and initiatives. By capitalizing on the governance potential of each respective level, REDD+ could promote successful multi-level governance for forests.

Conclusion

This paper examined the role and importance of forest tenure in making a global REDD+ agreement both sustainable and effective. In addition to conditioning the implementation of REDD+, tenure arrangements define the ability of actors at different levels to meet their forest needs. The local tenure situation in participating countries should thus be a major consideration in the negotiation and design of a global REDD+ framework. In particular, we have challenged the emphasis the REDD+ debate places on improving tenure security through harmonization of customary and statutory tenure. Evidence from common property and community-based resource management scholarship suggests that communities with secure tenure and a sense of ownership and control over their forests have a vested interest in preserving and sustainably managing the resource. However, we have shown that customary notions of ownership and the institutions governing such forms of tenure are not easily reconciled with the statutory property systems which formally govern much tropical forest land.

Moreover, the sheer number of different customary systems co-existing in one area mean that achieving harmonization and creating a consistent overarching set of tenure principles is nigh on impossible. In countries that have enacted laws allowing customary land title registration such as Uganda, evidence suggests that in addition to being fundamentally at odds with customary understandings of ownership and tenure, registration is a financial and logistical burden for local communities. The low number of registered titles following

Uganda's 1998 Land Act suggest that this method of harmonization may not prove adequate in the context of REDD+.

Yet as the multi-level governance perspective brings to light, REDD+ could embody an opportunity to enhance vertical integration in forest governance, and with a better understanding of the dynamics of local tenure, foster greater tenure security for local communities. The multi-level nature of a REDD+ agreement not only makes the issue of local ownership, tenure and governance globally relevant, it also establishes a framework in which financial resources and institutional support can reach local levels and tackle these problems on the ground.

This paper raises a number of questions which open up new areas requiring further research. While it is clear that greater attention to tenure can contribute to making REDD+ effective, questions such as ownership and the rights that ensue from different tenure arrangements, enforcement and institutional capacity, are complex and crosscutting and require further investigation in order to make a difference to REDD+. Furthermore, tenure is only one of many governance issues at stake in the establishment of a global forest agreement. It is not merely forests, but national economies, legal systems, local cultures and livelihoods that are implicated in REDD+. Given the long time-frame of REDD+ implementation, inputs from ongoing research can significantly contribute to its success. Readiness for REDD+ is thus not so much about meeting a set of governance targets, but rather about being ready to share knowledge and adapt to changes and challenges as they arise.

References

- Agrawal, Arun. 2001. Common-Property Institutions and Sustainable Governance of Resources. *World Development* 29 (10): 1649–1672.
- . 2002. Common Resources and Institutional Sustainability. In *The Drama of the Commons*, edited by Elinor Ostrom, Thomas Dietz, Nives Dolšak, Paul C. Stern, Susan Stonich, and Elke U. Weber, 41–86. Washington, DC: National Academy Press.
- . 2007. Forests, Governance and Sustainability: Common Property Theory and Its Contributions. *International Journal of the Commons* 1 (1): 111–136.
- Anaya, James, and S. Todd Crider. 1996. Indigenous Peoples, the Environment and Commercial Forestry in Developing Countries: The Case of Awás Tingni, Nicaragua. *Human Rights Quarterly* 18 (2): 345–367.
- Angelsen, Arild, Sandra Brown, Cyril Loisel, Leo Peskett, Charlotte Streck, and Daniel Zarin. 2009. *Reducing Emissions from Deforestation and Forest Degradation (REDD): An Options Assessment Report*. Washington, DC: Meridian Institute.
- Armitage, Lynn. 2001. Customary Land Tenure in Papua New Guinea: Prospects and Status. Available at <http://dlc.dlib.indiana.edu/archive/000f01043/00/armitage.pdf>, accessed 27 August 2009.
- Bache, Ian, and Matthew.V. Flinders, eds. 2004. *Multi-level Governance*. Oxford: Oxford University Press.

- Balland, Jean-Marie, and Jean-Philippe Platteau. 1996. *Halting Degradation of Natural Resources: Is there a Role for Rural Communities?* Oxford: Clarendon Press.
- Banana, Abwoli, and William Gombya-Ssembajjwe. 2000. Successful Forest Management: The Importance of Security of Tenure in Ugandan Forests. In *People and Forests*, edited by Clark Gibson, Margaret McKean and Elinor Ostrom, 87–89. Cambridge, MA: MIT Press.
- Banerjee, Ajit Kumar. 1997. Decentralization and Devolution of Forest Management in Asia and the Pacific. FAO Asia Pacific Forestry Sector Outlook Study, Working Paper Series, Working Paper No: APFSOS/WP/21. Rome: FAO Forestry Policy and Planning Division.
- Barume, Albert Kwokwo. 2000. Heading Towards Extinction? Indigenous rights in Africa: The Case of the Twa of the Kahuzi-Biega National Park, Democratic Republic of Congo. IWGIA Document No 101. Copenhagen: IGWIA.
- Berkes, Fikret. 2004. Rethinking Community-Based Conservation. *Conservation Biology* 18 (3): 621–630.
- Boyd, Emily. 2006. Scales of Governance in Carbon Sinks: Global Priorities and Local Realities. In *Bridging Scales and Knowledge Systems: Concepts and Applications in Ecosystem Assessment*, edited by Walter V. Reid, Fikret Berkes, Thomas Wilbanks, and Doris Capistrano, 105–127. Washington, DC: Island Press.
- Boyd, Emily, Maria Gutierrez, and Manyu Chang. 2007. Small-Scale Forest Carbon Projects: Adapting CDM to Low Income Communities. *Global Environmental Change* 17 (2): 250–259.
- Bray, David Barton, Camille Antinori, and Juan Manuel Torres-Rojo. 2006. The Mexican Model of Community Forest management: The Role of Agrarian Policy, Forest Policy and Entrepreneurial Organisation. *Forest Policy and Economics* 8 (4): 470–484.
- Bromley, Daniel. 1992. The Commons, Common Property and Environmental Policy. *Environment and Resource Economics* 2 (1): 1–77.
- Bromley, Daniel, and Michael M. Cernea. 1989. The Management of Common Property Natural Resources; Some Conceptual and Operational Fallacies. Discussion Paper No. 57. Washington, DC: World Bank.
- Bruce, John W. 1998. *Country Profiles of Land Tenure: Africa, 1996*. Land Tenure Centre, Madison, WI: University of Wisconsin.
- Bulkeley, Harriet, and Michele Betsill. 2005. Rethinking Sustainable Cities: Multi-level Governance and the Urban Politics of Climate Change. *Environmental Politics* 14 (1): 42–63.
- Chambers, Robert. 1983. *Rural Development: Putting the Last First*. London: Longman.
- Cole, Daniel. H. 2002. *Pollution and Property: Comparing Ownership Arrangements for Environmental Protection*. Cambridge: Cambridge University Press.
- CONFENIAE (Confederacion de Nacionalidades Indigenas de la Amazonia Ecuatoriana). 2009. Statement delivered at Unión Base, Puyo on August 3rd 2009.
- Cotula, Lorenzo, and James Mayers. 2009. Tenure in REDD: Start-Point or Afterthought? IIED Report. London: IIED.
- Cotula, Lorenzo, Camila Toulmin and Ced Hesse. 2004. *Land Tenure and Administration in Africa: Lessons of Experience and Emerging Issues*. London: IIED.
- Counsell, Simon. 2006. Forest governance in the Democratic Republic of Congo: an NGO perspective. Brussels: FERN. Available at www.fern.org/media/documents/document_3663_3664.pdf, accessed 19 August 2009.

- Dasgupta, Aniruddha, and Victoria A. Beard. 2007. Community Driven Development, Collective Action and Elite Capture. *Development and Change* 38 (2): 229–249.
- Davis, Crystal, Florence Daviet, Smita Nakhooda, and Alice Thuault. 2009a. A Review of 25 Readiness Plan Idea Notes from the World Bank Forest Carbon Partnership Facility. WRI Working Paper. Washington, DC: World Resources Institute. Available at <http://www.wri.org/gfi>, accessed 12 May 2009.
- . 2009b. Governance of Forests Initiative: Indicator Framework (version 1). WRI Working Paper. Washington, DC: World Resources Institute. Available at <http://www.wri.org/publications>, accessed 3 August 2009.
- Egbe, Samuel. 2001. The Concept of Community Forestry under Cameroonian Law. *Journal of African Law* 45 (1): 25–50.
- Eliasch, Johan. 2008. *Climate Change: Financing Global Forests, The Eliasch Review*. London: Crown.
- Essama-Nssah, Boniface, and James J. Gockowski. 2000. *Cameroon: Forest Sector Development in a Difficult Political Economy*. Washington, DC: World Bank.
- FAO. 2009. *State of the Forests 2009*. Rome: FAO.
- Finger-Stitch, Andrea, and Matthias Finger. 2003. *State versus Participation: Natural Resources Management in Europe*. London: IIED and IDS.
- Fitzpatrick, Daniel. 2005. Best Practice Options for the Legal Recognition of Customary Tenure. *Development and Change* 36 (3): 449–475.
- Gibson, Clark C., Margaret A. McKean, and Elinor Ostrom. 2000. *People and Forests: Communities, Institutions and Governance*. Cambridge, MA: MIT Press.
- Godoy, Ricardo, Marc Jacobson, Joel De Castro, Vianca Aliaga, Julio Romero, and Alison Davis. 1998. The Role of Tenure Security and Private Time Preference in Neotropical Deforestation. *Land Economics* 74 (2): 162–170.
- Griffiths, Tom. 2007. Seeing “RED”? “Avoided Deforestation” and the Rights of Indigenous Peoples and Local communities. FPF Report. Available at http://www.forestpeoples.org/documents/ifi_igo/avoided_deforestation_red_jun07_eng.pdf, accessed 7 January 2009.
- Gupta, Joyeeta, Kim Van Der Leeuw, and Hans De Moel. 2007. Climate Change as a “Glocal” Problem Requiring “Glocal” Action. *Environmental Sciences* 4 (3): 139–148.
- Hansen, Jamie. 2005. Tree Planting under Customary Tenure Systems in Malawi: Impacts of Marriage and Inheritance Patterns. *Agricultural Systems* 84 (1): 99–118.
- Hatcher, Jeffrey, and Luke Bailey. 2009. Tropical Forest Tenure Assessment: Trends, Challenges and Opportunities. RRI & ITTO Report. Yokohama: ITTO. Available at <http://www.rightsandresources.files.wordpress.com>, accessed 20 June 2009.
- Hayes, Tanya M. 2010. A Challenge for Environmental Governance: Institutional Change in a Traditional Common-Property Forest System. *Policy Science* 43 (1): 27–48.
- Heltberg, Rasmus. 2002. Property Rights and Natural Resource Management in Developing Countries. *Journal of Economic Surveys* 16 (2): 189–244.
- Hoare, Alison, Duncan Macqueen, M Muzong Kodi, Simon Counsell, Cath Long, and Pat Hardcalste. 2008. *Comment Parvenir à Une Gestion et Un Financement Durable Des Forêts en République Démocratique du Congo*. London: Chatham House.
- Humphreys, David. 2006. *Logjam: Deforestation and the Crisis of Global Governance*. London: Earthscan.
- Kaimowitz, David. 2003. Forest Law Enforcement and Rural Livelihoods. *International Forestry Review* 5 (3): 199–210.

- Larson, Anne M., Pablo Pacheco, Fabiano Toni, and Mario Vallejo. 2007. The Effects of Forestry Decentralization on Access to Livelihood Assets. *The Journal of Environment and Development* 16 (3): 251–268.
- Lavigne Delville, Philippe. 2000. Harmonising Formal Law and Customary Land Rights in French-speaking West Africa. In *Evolving Land Rights, Policy and Tenure in Africa*, edited by Camilla Toulmin Camilla and Julian Quan, 97–121. London: DFID/IIED/NRI.
- Lawlor, Kathleen, Lydia P. Olander, and Erika Weinthal. 2009. Sustaining Livelihoods While Reducing Emissions from Deforestation: Options for Policymakers. Working Paper NI WP 09–02. Durham, NC: Nicholas Institute for Environmental Policy Solutions, Duke University.
- Lindyati, Rita. 2003. Shaping Local Forest Tenure in National Politics. In *The Commons in the New Millennium: Challenges and Adaptation*, edited by Nives Dolsak and Elinor Ostrom, 221–264. Cambridge, MA: MIT Press.
- Lynch, Owen J., and Kirk Talbot. 1995. *Balancing Acts: Community-Based Forest Management and National Law in Asia and Pacific*. Washington, DC: World Resources Institute.
- Lyster, Rosemary. 2010. The New Frontier of Climate Law: Reducing Emissions from Deforestation and Degradation, Sydney Law School Legal Studies Research Paper No. 10/08.
- Makundi, Willy. 1998. Mitigation Options in Forestry, Land Use Change and Biomass Burning in Africa. Berkeley: Berkely National Laboratory, LBNL-42767, University of California, Berkeley.
- Malhi, Yavinder J., J. Timmons Roberts, Richard A. Betts, Timothy J. Killean, and Carlos A. Nobre. 2008. Climate Change, Deforestation and the Fate of the Amazon. *Science* 319: 169–172.
- Mbile, Peter, Gilbert Ndzomo-Abanda, Hermann Essouba, and Anicet Misouma. 2009. Alternate Tenure Enterprise Models in Cameroon: Community Forests in the Context of Community Rights and Forest Landscapes. World Agroforestry Centre Brief, May 2009.
- McKean, Margaret. 2000. Common Property: What Is It, What Is It Good For, What Makes It Work? In *People and Forests: Communities, Institutions and Governance*, edited by Clark C. Gibson, Margaret McKean, and Elinor Ostrom, 27–57. Cambridge, MA: MIT Press.
- McNeely, Jeffrey A. 1998. *Economics and Biological Diversity: Developing and Using Economic Incentives to Conserve Biological Resources*. Gland: IUCN.
- Miles, Lera, and Valerie Kapos. 2008. Reducing Greenhouse Gas Emissions from Deforestation and Forest Degradation: Global Land-Use Implications. *Science* 320: 1454–1455.
- Minang, Peter A., and Mike K. McCall. 2008. Multi-level Governance Conditions for Implementing Multilateral Environmental Agreements: The Case of CDM Forestry Readiness in Cameroon. *Energy & Environment* 19 (6): 845–860.
- Musafiri, Nobirabo P. 2008. Land Rights and the Forest Peoples of Africa: Historical, Legal and Anthropological Perspectives. No 3: Historical and Contemporary Land Laws and their Impact on Indigenous Peoples' Land Rights in DRC. Moreton-on-Marsh: Forest Peoples Programme Report.
- Nguyen Quang Tan, Nguyen Van Chinh, and Vu Thu Hanh. 2008. *Statutory and Customary Forest Rights and their Governance*. Geneva: IUCN.

- Owubah, Charles E., Dennis C. Le Master, J. Michael Bowker, and John G. Lee. 2001. Tenure Systems and Sustainable Forest Management: The Case of Ghana. *Forest Ecology and Management* 149 (1–3): 253–264.
- Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.
- . 1999. Coping with Tragedies of the Commons. *Annual Review of Political Science* 2: 493–535.
- Pacheco, Pablo. 2006. Decentralización Forestal en Bolivia: Implicaciones en el Gobierno de los Recursos Forestales y el Bienestar de los Grupos Marginados. Santa Cruz, Bolivia: CIFOR, IDRC.
- Paavola, Jouni. 2008. Governing Atmospheric Sinks: The Architecture of Entitlements in the Global Commons. *International Journal of the Commons* 2 (2): 313–336.
- Peskett, Leo, and Zoe Harkin. 2007. Risk and Responsibility in Reduced Emissions from Deforestation and Degradation. FPEP Forestry Briefing No. 15. London: ODI.
- Peskett Leo, David Huberman, Evan Bowen-Jones, Guy Edwards, and Jessica Brown. 2008. Making REDD work for the Poor. PEP Report. Available at www.povertyenvironment.net/pep.
- Platteau, Jean-Phillippe. 1996. The Evolutionary Theory of Land Rights as Applied to Sub-Saharan Africa: A Critical Assessment. *Development and Change* 27 (1): 29–86.
- . 2004. Monitoring Elite Capture in Community-Driven Development. *Development and Change* 35 (2): 223–246.
- Rametsteiner, Ewald. 2009. Governance Concepts and their Application in Forest Policy Initiatives from Global to Local Levels. *Small-scale Forestry* 8 (2): 143–158.
- Ribot, Jesse C. 1998. Theorising Access: Forest Profits along Senegals Charcoal Commodity Chain. *Development and Change* 29 (2): 307–341.
- Ribot, Jesse C., and Nancy Peluso. 2003. A Theory of Access. *Rural Sociology* 68 (2): 153–181.
- Romano, Francesca. 2007. Understanding Forest Tenure: What Rights and for Whom? (Powerpoint presentation) Rome: FAO. Available at www.icarrd.org/.../STS%20FAO-FO%20Understanding%20Forest%20Tenure.ppt, accessed 16 August 2009.
- Sandler, Todd. 1992. *Collective Action: Theory and Applications*. Ann Arbor, MI: University of Michigan Press.
- Saunders, Lindsay S., Robin Hanbury-Tenison, and Ian R. Swingland. 2002. Social Capital from Carbon Property: Creating Equity for Indigenous Peoples. *Philosophical Transactions: Mathematical, Physical and Engineering Sciences* 360 (1797): 1763–1775.
- Schlager, Edella, and Elinor Ostrom. 1992. Property Rights Regimes and Natural Resources: A Conceptual Analysis. *Land Economy* 68 (3): 249–262.
- Skutch, Margaret, and Patrick E. Van Laake. 2009. REDD as Multi-Level Governance in the Making. *Energy and Environment* 19 (6): 831–844.
- Skutch, Margaret, Kamal Banskota, Eveleine Trines, and Bhaskar Karky. 2008. Governance for REDD. Policy Note No. 4. Think Global, Act Local Project: Poznan, Poland.
- Sunderlin, William, Jeffrey Hatcher, and Megan Liddle. 2008. From Exclusion to Ownership? Challenges and Opportunities in Advancing Forest Tenure Reforms. RRI Report. Washington, DC: Rights and Resources Institute.
- Talwar, Deepshikha Mehra, and Rucha Ghate. 2003. Community Initiated Forest Man-

agement Without Land Tenure: How Feeble How Strong? A Study of Three Villages from Central India. Presented at "Politics of the Commons: Articulating Development and Strengthening Local Practices," Chang Main, Thailand, July 11–14 2003. Available at <http://dlcvm.dlib.indiana.edu/archive/00001093/>, accessed 30 August 2009.

- Taylor, Peter Leigh. 2006. Country Case Study: Forest Tenure and Poverty in Bolivia. Colorado State University Report prepared for CIFOR, August 2006. Bogor, Indonesia.
- Tonye, Jean, Christine Meke-me-ze, and Pierre Titi-Nwell. 1993. Implications of National Land Legislation and Customary Land and Tree Tenure on the Adoption of Alley Farming. *Agroforestry Systems* 22 (2): 153–160.
- Topa, Giuseppe, Alain Karsenty, Carole Megevand, and Laurent Debroux. 2009. *The Rainforests of Cameroon: Experience and Evidence from a Decade of Reform*. Washington, DC: World Bank.
- Unruh, Jon D. 2002. Poverty and Property Rights in the Developing World: Not as Simple as We Would Like. *Land Use Policy* 19 (4): 275–276.
- . 2008. Carbon Sequestration in Africa: The Land Tenure Problem. *Global Environmental Change* 18 (4): 700–707.
- Van der Werf, Guido, Douglas C. Morton, Ruth S. DeFries, Jos G. J. Olivier, Prasad S. Kasibhatla, Robert B. Jackson, Jim Collatz, and James T. Ranaderson. 2009. CO₂ Emissions from Forest Loss. *Nature Geoscience* 2 (11): 737–738.
- Wade, Robert. 1987. The Management of Common Property Resources: Collective Action as an Alternative to Privatization of State Regulation. *Cambridge Journal of Economics* 11 (2): 95–106.
- Williams, Michael. 2008. A New Look at Global Forest Histories of Land Clearing. *Annual Review of Environment and Resources* 33: 345–367.
- White, Andy, and Alejandra Martin. 2002. Who Owns the World's Forests? Forest Tenure and Public Forests in Transition. Forests Trends Report. Washington, DC: Forest Trends.
- Wily, Liz A. 2004. Can We Really Own the Forest? A Critical Examination of Tenure Development in Community Forestry in Africa. Paper presented at the Tenth Biennial Conference, International Association for the Study of Common Property (IASCP), 9–13 August 2004, Oaxaca, Mexico.