A Framework for Evaluating the Impacts of Expanded Trade and Investment on Forests: Customary Rights and Societal Stakes

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ABSTRACT

The forest sector is more embedded in the global economy than ever. With globally significant supplies of land and raw materials and favorable terms for foreign investors, developing countries - particularly in Africa - have become increasingly attractive trade partners and destinations for investors. Economic growth is anticipated to increase demand for energy, water, food and forest products (Toyne et al, 2002; White et al, 2007), trends which are already evident in the recent food and fuel crises. Increasing competition over land is placing new pressures over vast tracts of forest and woodland, areas often considered "under-utilized" by national governments despite their critical role in supporting local livelihoods. While increased demand for forest products and agricultural commodities in the context of forest tenure reforms and decentralized decision-making (Sunderlin et al, 2008; White and Martin, 2002) could create unprecedented economic opportunities for forest-dependent communities, increased "stakes" over forest resources and land will heighten governance challenges. This paper provides a conceptual framework for analyzing shifting patterns of tenure and rights in the forestry sector for a host of sectoral and extra-sectoral commodities shaping forests. It aims to provide a framing for case studies to be presented at a panel entitled, "Large-Scale Investments in the Forest Frontier: Customary Rights and Societal Stakes" (Panel ID No. 461). By presenting case studies from diverse contexts (Africa, Asia, Latin America) and sectors (agriculture, energy, forestry, mining), the utility of the framework will be explored while distilling key commonalities and differences in shifting patterns of customary rights and societal stakes associated with large-scale land and resource acquisitions in the global South.

Introduction

Growing levels of international trade and investment in agricultural commodities, biofuels and extractive industries are placing increasing pressure on land and tropical forests. These trends are driven by a number of factors, among these the integration of international financial systems, efforts by developing country governments to improve the investment climate and attract foreign investment, recent spikes in global commodity prices, and rapid growth of emerging economies and their growing demand for raw materials. Global demand for agricultural commodities, in part induced by policies committing industrialized countries to shifts from fossil fuels to biofuels, has also prompted agro-business expansion, with direct and indirect implications for customary rights and the wider set of societal values and ecosystem services associated with these landscapes.

Forests, woodlands and rangelands – often viewed as "unproductive" and "under-utilized" by governments – have often become the target for new investments despite the livelihood and

safety net functions these forests provide and the customary rights associated with them. Recent research suggests that the recent wave of forest tenure reforms aimed at enhancing local ownership and control over forests may be in jeopardy, as governments derive more immediate benefit from industrial management models (Eba'a Atyi, 1998; Global Forest Watch, 2000; Sunderlin et al, 2008). This paper presents a framework for analyzing shifts in tenure and rights associated with local ("community") and societal stakes in this process.

Theoretical Antecedents

Property Rights

In addition to classifications of forest tenure by rights holders, it may be analyzed as a "bundle of rights." For common property resources, these include the following (Schlager and Ostrom, 1992):

- Access: the right to enter a defined physical property
- <u>Withdrawal</u>: the right to obtain "products" of a resource, i.e. harvesting rights (what, when, how, for what purpose)
- <u>Management</u>: the right to regulate internal use patterns and transform the resource by making improvements
- Exclusion: the right to determine access and withdrawal rights
- Alienation: the right to sell or lease the above rights

Some authors further differentiate these different aspects of "breadth" of rights with two other important dimensions: duration (the time over which rights are held) and assurance (the ability of individuals to exercise their rights) (Place and Swallow, 1993). The concept of bundle of rights acknowledges that individuals may hold some forms of rights, while not holding others. In Africa, for example, local communities are often given rights to access forest areas and withdraw forest products for their own consumption, but certain rights to transfer forest products to others through sale are restricted through absolute prohibition (common for jointly managed protected areas and high-value resources) or taxation. In forestry, assessing which rights in the bundle are held by whom is complex, as it is often necessary to differentiate between rights to land vs. forest, diverse forest products (timber and non-timber forest products) and to forests and subsurface resources. With new markets for forest ecosystem services emerging, this web of rights becomes ever more complex, extending rights to biodiversity conservation, watershed protection and carbon sequestration to national and global communities. Further complexities emerge due to overlap and contradictions between formal and customary, *de jure* (legally recognized) and *de facto* (practiced) rights.

Forest Tenure Dynamics in the Context of Globalized Trade and Investment

The Colonial legacy and the privileged position it has afforded government actors left much of Africa's forests and valuable forest resources in the public domain. Formal rights – which have historically focused on valuable resources such as land and timber – were retained by the State, while communities were allowed usufruct rights to land and less valuable non-timber forest

products. This pattern continues today in the form of State control over a large portion of the forest estate, downward transfer of authority to low-value or already degraded forests, and the tendency to leverage heavy taxes and administrative requirements on the felling and transfer of timber – even on customary land.

Yet a series of reports produced by the Rights and Resources Initiative has highlighted a transition in forest tenure toward greater community ownership and control (Sunderlin et al, 2008; White and Martin, 2002). In the 2002 report, this transition was shown to consist of three major trends. The first is a tendency to increasingly recognize community and indigenous ownership. The second trend, associated with the trends in community-based natural resource management and decentralization, is the transfer of management responsibilities (along with a relatively restrictive set of use rights) to communities. The final trend is associated with the reform of publicly granted forest concessions to enhance community access to timber and revenue. They found that for the developing countries studied, community reserves and ownership amounted to at least 22 percent of all forest. The 2008 report shows that trend to continue, with a 10% increased in forests designated for use by communities and indigenous peoples and a 7% increase in community ownership (with a much smaller percentage *decreasing* land designated to each category).

Increased demand for forest products and other commodities in the context of forest tenure reforms and decentralized decision-making could create unprecedented economic opportunities for forest-dependent communities. However, increased commercial pressures will enhance the "stakes" over forest resources and land, which is likely to create new levels and types of challenges for forest governance. The literature has provided ample evidence for elite capture by powerful economic interests in contexts of weak and shifting governance (Mapedza, in press; Kassibo, 2008). Furthermore, poor track records of regulatory reforms, entrenched industrial interests, economies of scale and diminished roles and responsibilities of national governments represent substantial challenges for making this reality. Will recent progress in forest tenure reforms toward enhanced local ownership retrench in the context of increased foreign direct investment and industrial pressure over land? As stated by Wily (2003):

Already there are signs that governments do not always sustain their enthusiasm for decentralized mechanisms when they confront the realities of implementation or the loss of control over the periphery that some of the more genuine moves towards decentralisation embody. Nor do decentralised approaches always sit easily with other common objectives of current reforms and most particularly, a wish to free up the land market. This is because decentralised approaches tend to go hand in hand with heightened protective measures of majority land interests that may make land access by investors not as straightforward as they may wish.

Demand for forest land has increased as commercial interests in land-based commodities have expanded. Governments tend to view remaining forests, woodlands and rangelands as "unproductive" or "underutilized," and therefore available for industrial expansion. Indeed, for the 7 forest-rich African nations studied by Sunderlin et al (2008), the forest area allocated to concessions was in the order of 11.2 Million hectares, as compared to the 1.0 Million hectares designated for or owned by communities. They conclude that governments tend to show a

3

¹ Concessions granted to logging, NTFP extraction, mining, exploitation of oil and gas, and agricultural production are included in this figure.

preference for industrial concessions and biodiversity conservation over community-based forest management. Reasons for this might include the greater revenue flows from commercial-scale investments, limited awareness of the livelihood functions of these areas, the limited "visibility" of extensive uses of land to policy makers (Scott, 1998), and the political and financial leverage of the business and international conservation communities.

The ambiguities created by legal pluralism (most notably, customary and statutory rights coexisting), contradictory rights to surface and sub-surface resources, and forest tenure reforms create very real threats for sustainable forest management and local livelihoods where commercial pressures over land are high. This paper presents a framework for analyzing the effect of increased industrial pressure over forest land and resources on customary rights and societal stakes.

A Framework for Analyzing Shifting Patterns of Forest Tenure & Rights

The proposed framework for assessing shifting patterns of forest tenure and rights was derived from an analysis of rights-based issues associated with a set of industrialized commodities known to have significant impacts on forests.

Sectors / Commodities with Significant Impacts on Forests

Expanded trade with and investment flows to forest-rich countries for commodities highlighted in Table 1 are known to place significant pressure on forests and forest-based livelihoods.

Table 1. A Classification of Commodities Placing Significant Pressure on Forests and Forest-Based Livelihoods

Commodity Type	Category	Other Factors Affecting the Nature of Impacts
"Sectoral"	-Wood productsRound logs, sawnwoodPulp and Paper	-Source (silvicultural plantations vs. timber concessions vs. illegal logging)
	Non-timber forest productsVarious	-Species characteristics
	Forest ecosystem servicesCarbonBiodiversityWater	-Conservation model (regulatory vs. rewards-based); beneficiaries of conservation rents (private sector, government, communities)
"Extra-sectoral"	BiofuelsBioethanol feedstocksBiodiesel feedstocks	-Business models (small-scale vs. industrial, outgrower schemes)
	Agro-industrial cropsSoyBeefTobaccoCotton	 Nature of impacts (direct or indirect; forest conversion or woodfuel demand for construction and energy)

- -Sub-surface
 - Metals and minerals
 - Fossil fuels

-Open or deep pit; direct displacement vs. wood demand (e.g., for underground structural supports); direct or indirect (e.g., road construction, urbanization)

Dimensions of Tenure and Rights

What dimensions of tenure and rights are at stake with increased commercial pressure on forests? While Schlager and Ostrom (1992) offer insights into the nature of rights that may be at stake in common property regimes, other complementary perspectives are needed in relation to both local and societal "stakes."

Local Stakes

In terms of local communities, tenure and rights may be affected in the following ways:

1. Shifts in Customary "Bundle" of Rights

Industrial-scale concessions may limit access, withdrawal and management rights through their privatization for a specified time period. While some concessionaires allow a restricted set of access and withdrawal rights (e.g. collection of firewood, grazing) as commercial operations proceed, others may restrict access entirely. Industrial-scale concessions may also affect rights to exclude others if communities are given no discretionary authority over the granting of concessions and how they operate, or if they have limited understanding of what is being negotiated (Freeman et al, 2008). Finally, alienation rights can also be undermined if no compensation is paid to communities when rights are transferred to industry, or when compensation is less than its true value. The level of compensation should be compared to the full opportunity costs associated with activities foregone during the concession period and beyond (e.g. opportunities lost due to the degraded state of the resource).

Industrial-scale pressure over forest resources such as timber and fuelwood may limit withdrawal rights by depleting resources of local importance, as in the extirpation of valuable timber species of interest to industry, furniture makers and local communities alike (Mwitwa et al, in prep.). Management rights may also be undermined by subjecting forest areas to the discretionary authority of commercial actors, while rights to exclude may be undermined should decisions to grant access to industrial actors or intermediaries be taken by local government or local elites in the absence of more widespread representation.

2. The Magnitude and Distribution of "Externalities"

In addition to shifts in customary rights, a host of secondary benefits and costs ("externalities") – both anticipated and unanticipated – accompany any industrial-scale intervention through direct and indirect influences. Some of these relate to the flows of benefits associated with industrial-scale activities, whether in the form of employment (number of jobs and terms of employment), revenue (proportion of revenue returned to the

local level, and how it is governed to derive local benefits) or markets for products and services created through the stimulation of economic growth. Others relate to the magnitude of costs – whether social (e.g. prevalence of conflict, disease and other social ills), economic (loss of economic opportunities) or environmental (e.g. air and water pollution). It is also important to understand how these benefits and costs are distributed among the local population, between customary rights holders and others less affected but potentially benefiting from these developments.

Societal Stakes

It is also important to recognize the societal stakes associated with industrial-scale activities which affect the rights of citizens. These include both issues related to the wise governance of "public goods" as well as externalities affecting society at large.

1. Governance of "Public Goods"

Natural resources owned or controlled by the state are a form of "public good" for which certain rights should apply to citizens. The governance of these resources to fulfill functions considered in the public interest is the concern of all citizens. One of the primary concerns for developing country citizens should be how these resources are harnessed for meaningful economic development – whether through employment creation, revenue generation, or the expansion of market opportunities and social services. The terms of trade and investment deals matter, in terms of tax rates paid and percentage share on royalties from resources exploited by industry. Also of concern is how tax revenues and royalties from forest resource exploitation are governed – and whether it is in the society's interest. The transparency and terms of investment agreements and financial flows to and through government agencies are of paramount importance to the question of civil rights around forests. In cases where land transfers from customary to state control (such as through the process of establishing leasehold tenure on customary land), how that land is governed and in the interests of whom also comes into play.

2. Social, Economic and Environmental Externalities

Externalities from industrial-scale activities carried out in forest areas may also have repercussions for society at large. This may be positive, in the form of economic stimulus provided by industrial-scale labor and service demands or technological spillovers. Large-scale externalities may also include negative impacts on environmental services of national concern (e.g. water and air quality), negative macro-economic effects or social conflict. Recent studies into the "natural resource curse" have highlighted why natural resource wealth tends to undermine economic performance, including the reduced competitiveness of other sectors and the weakening of governance (Auty, 1993; Collier, 2007; Sachs and Warner, 1995). Similar to local-level externalities, it is important to know how these externalities are shouldered by different sectors of society.

The various dimensions of tenure and rights are summarized in Box 1.

Box 1. Tenure and rights dimensions of globalized trade and investment in forests

- "Local stakes" vis-à-vis globalized trade and investment:
 - Shifts in customary "bundle" of rights in forest areas
 - The magnitude and distribution^a of externalities (local employment, local revenue share, demand for products and services, social impacts, impact on environmental services of local concern)
- "Societal stakes" vis-à-vis globalized trade and investment:
 - Governance of public goods vis-à-vis the public interest:
 - Terms of trade and investment agreements (tax rates, revenue share)
 - Job creation (number of jobs per area or per commodity output, terms of employment)
 - Use of revenue vis-à-vis national development priorities
 - Societal externalities:
 - Macro-economic effects
 - Impacts on environmental services of national concern (e.g. water and air quality, biodiversity)

The Framework

The conceptual framework for analyzing shifting patterns of tenure and rights in the forestry sector for sectoral and extra-sectoral commodities shaping forests is summarized in Figure 1. Here, the various commodities are broken down not by sector, but by the nature of commodity influence. This is done for two reasons. First, the nature of impacts on customary tenure and societal rights varies a great deal between concessions and large-scale plantations on the one hand, and selective harvesting of (or pressure on) forest products and services of interest to industry on the other. Secondly, whether a commodity exhibits either or both of these influences has little to do with its sectoral classification. For example, timber may be exploited by industry from large-scale concessions or through selective harvesting in natural forest, or through silvicultural plantations. Similarly, extra-sectoral commodities may exert an influence on forests through forest conversion and displacement, or though targeted pressure on forest resources of interest. Tobacco cultivation, for example, exerts an influence on forests not only through plantation establishment, but through the sourcing of fuel wood for barn construction and curing. The latter may, in turn, be done through plantations, timber concessions or informal harvesting from natural forests.

^a Among local elites and others; between customary rights holders and other "local communities"; by gender / ethnicity; between local government and local constituents.

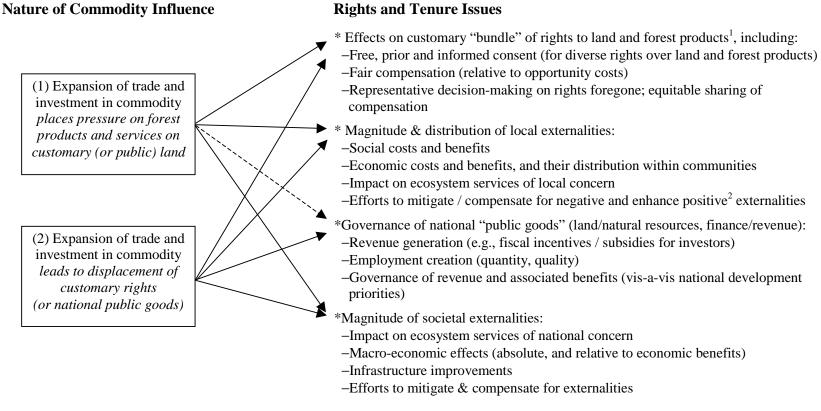


Figure 1. Framework for Assessing the Impact of Forest-Related Trade and Investment on Customary Rights and Societal Stakes

¹ In cases of displacement, retention of compatible customary rights also needs to be looked at (e.g. grazing, fuelwood collection).

² For example, by supporting outgrower schemes – which may pertain to the commodity of interest or to other forest products (e.g. fuel wood) required for processing.

Operationalizing the Framework

In this section, the various parameters employed to assess shifts in forest tenure and rights are operationalized through a series of research questions matched to the nature of the impact.

1. Expansion of trade and investment in commodity *places pressure on forest products and services* on customary or public land

Parameter Research Questions 1. Shifts in customary rights: To what extent have industrial activities impinged -Effects on customary "bundle" of rights to upon the customary bundle of rights for male and female forest users? 2. FPIC: Were *local chiefs* with jurisdiction over land where forest products or land and forest products services are sourced by industry (or their intermediaries) adequately consulted^a on rights allocated to others or foregone, and under what conditions? Were other customary rights holders consulted – either directly or through forms of representation viewed by them as legitimate? 3. Fair compensation: Has any money or other compensation been paid to local communities in exchange for rights to access forest products or enhance ecosystem services? Are the payments made to communities meaningful, relative to the opportunity costs (economic benefits displaced now and into the 4. Equitable compensation: If cash or other compensation was made to communities foregoing customary rights (e.g. via reduced productive value of forests), to what extent are these perceived to be equitably used or allocated among customary rights holders? -Magnitude and 1. Have forest uses by industry had any effect on ecosystem services of concern to customary rights holders (e.g. biodiversity, water quality / distribution of local quantity)? If so, how have these changes affected local livelihoods? externalities 2. Have forest uses by industry led to any economic externalities? If positive^b, how are benefits distributed between customary rights holders and local residents from other areas? If negative, how do these compare to the benefits derived from compensation? 3. Have forest uses by industry led to any social externalities? 4. Have actions been taken by industry to mitigate negative externalities? 1. To what extent are industrial uses of forest products/services on public lands -Governance of taxed, and at what level? How does this compare to the true value of the national public goods product/service? 2. How much employment is generated from industrial uses of forest products/services on public lands, and on what terms (permanence, benefits)? 3. How are proceeds utilized, and with what benefit to society? -Magnitude of societal 1. Have forest uses by industry on customary or public land had any effect on externalities ecosystem services of national concern? If so, at what cost (to human health, other economic activities, etc.)? 2. Have actions been taken by industry to mitigate negative externalities?

^a Using principles and practices of Free, Prior and Informed Consent.

^b For example, through direct employment, service provision or outgrower schemes.

2. Expansion of trade and investment in commodity *leads to displacement of customary* rights or national public goods

Parameter

Research Questions

- -Effects on customary "bundle" of rights to land and forest products
- 1. <u>Shifts in customary rights</u>: Did customary rights holders exercise rights to alienate land to industry or conservation interests? Were any customary access and use rights maintained in mining concession areas (e.g. grazing, fuel wood collection)?
- 2. <u>FPIC</u>: Were *local chiefs* with jurisdiction over concession areas adequately consulted on rights foregone, and under what conditions? Were *other customary rights holders* consulted either directly or through forms of representation viewed by them as legitimate?
- 3. <u>Fair compensation</u>: Were communities compensated for loss of customary access and use rights in areas occupied by concessions and related infrastructure (roads, industrial zones, etc.)? What percentage of taxes and revenue are retained by local communities, how is this revenue governed and with what benefit? Is the total compensation meaningful, relative to the opportunity costs (economic benefits displaced now and into the future)?
- 4. <u>Equitable compensation</u>: If cash or other compensation was made to communities foregoing customary rights, to what extent are these perceived to be equitably used or allocated among customary rights holders?
- -Magnitude and distribution of local externalities
- 1. Have forest uses by industry had any effect on ecosystem services of concern to customary rights holders (e.g. biodiversity, water quality / quantity)? If so, how have these changes affected local livelihoods?
- 2. Have forest uses by industry led to any economic externalities? If positive^a, how are benefits distributed between customary rights holders and local residents from other areas and what percentage of displaced populations have benefited? If negative, how do these compare to the benefits derived from compensation?
- 3. Have forest uses by industry led to any social externalities?
- 4. Have actions been taken by industry to mitigate negative externalities?
- -Governance of national public goods
- 1. How much is paid to the government in the form of taxes and royalties? What percentage of company profits or the full value of the resource retained nationally?
- 2. How many people are employed (full-time equivalents^b) in absolute terms, and relative to the value of the resource? What percentage of employment is casual vs. full time with benefits?
- 3. How are proceeds utilized, and with what benefit to society?
- -Magnitude of societal externalities
- 1. Have forest uses by industry on customary or public land had any effect on ecosystem services of national concern? If so, at what cost (to human health, other economic activities, etc.)?
- 2. Have actions been taken by industry to mitigate negative externalities, and how effective have these been?

^a For example, through direct employment, service provision or outgrower schemes.

^b When calculating number of employees from part-time or casual labor force, consider total days or months per year and calculate in terms of percentage (e.g. 0.5 jobs for 6 months employment).

Discussion and Conclusions

Foreign economic interests for a host of commodities are increasingly playing a dominant role in the management and sustainability of African forests. Customary rights to forests are shifting, largely in favor of industrial interests and greater government control over resources, while societal stakes are on the rise. Research is sorely needed to highlight the trade-offs for local and societal actors alike, among these: (i) how economic benefits compare with social, economic and environmental costs for customary rights holders; and (ii) how costs and benefits are distributed within society (in particular, between Zambian citizens, government and the private sector).

This paper outlines a framework for highlighting the shifts in customary rights and societal stakes characterizing trade and investment in key commodities shaping forests. The framework provides a means to incorporate but move beyond consideration of the customary "bundle of rights" to incorporate positive and negative externalities for forest users and society at large, and to explore the extent to which societal benefits justify societal costs. The case studies in this panel employ the framework to evaluate the effects on customary rights and societal stakes associated with globalized trade and investment in diverse commodities shaping forests in Africa, Southeast Asia and Latin America. These include the expansion of biofuels (oil palm in Indonesia, jatropha in Africa) and other agroindustrial crops (soybean in Bolivia, tobacco in Malawi); timber (in Bolivia) and sub-surface resources (copper in Zambia). Through presentations and the discussion to follow, lessons will be distilled on the utility of the framework for evaluating shifting rights and stakes in the context of globalized trade and investment, and on the extent to which findings are similar across sectors and global forest ecoregions.

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References

- Auty, R.M. (1993) Sustaining Development in Mineral Economies: The Resource Curse Thesis. London: Routledge.
- Collier, P. (2007) *The Bottom Billion: Why the Poorest Countries are Failing and What can be Done about It.* Oxford: Oxford University Press.
- Cuny, P., P. Abe'ele, G.-M. Nguenang, N. E. Eboule Singa, A. Eyene Essomba and R. Djeukam (2004). Etat des lieux de la foresterie communautaire au Cameroun. Yaoundé, Cameroon, Ministry of Forests-DF-CFC.
- Fraser, A. and J. Lungu (2007) For whom the windfalls? Winners and losers in the privatization of Zambia's copper mines. Report available at www.minewatchzambia.com.
- Goldman Sachs Group (2003) Dreaming with the BRICs: The Path to 2050. *Global Economics Paper* No. 99.
- Huse, M.D. and S.L. Muyakwa (2008) China in Africa: Lending, policy space and governance. Oslo: Norwegian Campaign for Debt Cancellation and Norwegian Council for Africa.

- Kassibo, B. (2008) Les Gouvernements Locaux et la Gouvernance des Ressources Forestieres au Mali: Fiscalité et Gestion Participative Décentralisée des Ressources Forestières dans la Commune Rurale de Siby. Paper presented at the *Workshop on Forest Governance and Decentralization in Africa*, April 8-11, 2008, Durban, South Africa.
- Mapedza, E. (in press) Decentralization Outcomes in the Context of Political Uncertainty in Zimbabwe: A Comparative Assessment of Co-Management and CAMPFIRE and Implications for Policy. In: German, L., A. Karsenty and A.-M. Tiani (eds.), *Governance of Africa's Forests in a Globalized World*. London: Earthscan.
- MINEFI (2006) Audit économique et financier du secteur forestier au Cameroun Draft n°1 Août 2006. Yaounde: Ministère de l'Économie et des Finances.
- MINFOF (2006) Rapport de la mission sur l'etat des lieux des forêts communautaires attribuees au Cameroun. Yaounde: Ministére des Forêts et de la Faune.
- MINFOF (2008) La production forestière en chiffres. *Lettre Vert* 20: 24-42. Yaounde: Ministére des Forêts et de la Faune.
- Ndjanyou, L. and C. H. Majerowicz (2004) Actualisation de l'étude sur la fiscalité décentralisée du secteur forestier camerounais. Boulogne, France: Institutions & Développement.
- Nzoyem, N., M. Sambo and C. H. Majerowicz (2003) Audit de la fiscalité décentralisée du secteur forestier camerounais. Boulogne, France: Institutions & Développement.
- Rich, B. (2007) Blank checks for unsustainable development. Environmental Forum (March/April): 1–5.
- Sachs, J.D. and A.M. Warner (1995) Natural resource abundance and economic growth. NBER Working Paper No. 5398.
- Schlager, E. and E. Ostrom (1992) Property-Rights Regimes and Natural Resources: A Conceptual Analysis. *Land Economics* 68(3):249-262.
- Scott, J.C. (1998) Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed. New Haven: Yale University Press.
- Simukanga, S. (2001) Status of Air Pollution in Zambia. Unpublished report, University of Zambia. Available at: http://www.sei.se/rapidc/pdfs/AirPolZam.PDF (accessed January 17, 2009)
- Sunderlin, W.D., J. Hatcher and M. Liddle (2008) From Exclusion to Ownership? Challenges and Opportunities in Advancing Forest Tenure Reform. Washington, D.C.: Rights and Resources Initiative.
- Toyne, P., C. O'Brien and R. Nelson (2002) The Timber Imprint of the G8 and China: Making the Case for Green Procurement by Government. Gland: WWF.
- White, A. and L. Martin (2002) Who Owns the World's Forests? Forest Tenure and Public Forests in Transition. Washington, D.C.: Forest Trends. 30 p.
- White, A., X. Sun, K. Canby, J. Xu, C. Barr, E. Katsigris, G. Bull, C. Cossalter and S. Nilsson (2006) China and the global market for forest products: Transforming trade to benefit forests and livelihoods. Forest Trends, Washington, D.C.