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Who owns Africa's forests? Exploring the impacts of forest tenure reform on forest ecosystems and livelihoods

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ABSTRACT

African countries are at different stages of decentralizing rights and responsibilities for forest resources management to local communities. However, there is still reluctance on enabling security of tenure rights for different reasons. This lack of clarity on rights and entitlements has constrained the sustainable management of forests for livelihood improvement and wealth creation as well as for sustainable use. This is attributed to the lack of formal rights bestowed on rural communities deriving goods and services from forested landscapes. Understanding how decentralization has shaped access, use and management of forest resources by forest adjacent communities provides useful lessons and experiences that can inform ongoing debates on land, trees and forest and tree tenure that are critical in sustainable forest management. This paper explores: (i) the process and history of forest tenure reform in sub-Saharan Africa; (ii) how and why powers and responsibilities over forest resources have been decentralized and the extent to which Africa's rural communities have the ability to exercise such powers and responsibilities to improve their livelihoods; and (iii) whether security of tenure over forest resources translates into improved wellbeing. A synthesis of the evolution of forest tenure in Africa provides an understanding of who really owns Africa's forests and how such ownership shape forest resource management.

KEYWORDS

Decentralization; security of tenure; community; livelihood; rights; gender; responsibilities; sustainable forest management

Background

Many countries have legislated for decentralization (Ndegwa 2002) for different reasons, e.g. improved service delivery and resource management. Natural resources, especially forests, can provide a lens for understanding the impacts of decentralization, because: (i) the way forests are used and managed impacts on forest authorities, local communities and the

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private sector in different ways; and (ii) community forest management is being implemented in over 35 countries in Africa with 20 countries having enabling policy frameworks in place (Odera 2004), though the scale and real extent of such decentralization is variable on the ground (Larson & Ribot 2005; Rights & Resources Initiative 2014a). Such natural resource management reforms arose mainly from environmental concerns expressed at the 1992 Rio Earth Summit that promoted decentralization, especially of the management of forests as one means to improve conservation. As a result, nearly 20 sub-Saharan African states adopted community forestry in the 1990s (and possibly 25 states by 2011), although with widely differing impacts on forest tenure (Alden-Wily 2014).

Across Africa community and individual tenure rights are promoted, often as part of decentralization. Decentralization presents opportunities for: (i) harmonizing decentralized forest management with land law, as Tanzania and Mozambique have done; (ii) supporting growing demands for community and co-managed forests; and (iii) different forms of rights including community ownership, co-management and use rights. Despite these opportunities, communities' ability to negotiate and defend their various rights is challenging because the State still has over-riding rights, as a survey of statutory forest tenure in Africa showed, where government claims ownership of 98% the forest (Sunderlin et al. 2008), though by 2013 this had dropped to 93.7% (Rights & Resources Initiative 2014b).

In community forest tenure, the notion of 'local community' can be fraught with difficulty. For example, in South-west Cameroon, present-day forest settlements are social formations resulting from heterogeneous peoples coalescing to convert forests into agricultural land. Here, the social construct of 'community' with respect to community forest management may be more important than management and decentralization of natural resources management to democratically elected local councils. This is complicated by the proliferation of projects that build their own forms of 'community participation' outside contexts of administrative decentralization, and customary structures (Nhantumbo & Macqueen 2003; Manor 2005; Ribot 2005).

Today three-quarters of sub-Saharan countries have land reforms in preparation or under way, to better enable citizens and communities to be participants in land-based growth (Alden-Wily 2011). Structuring law and formalizing rights to assure them control over their natural capital (land and resources) is a surer way to further growth. A major result has been the decline in the proportion of rural lands in many of these countries which are designated as public, State or national lands. Much of this area is now acknowledged as community land (Alden-Wily 2011).

Securing rights to forest resources are important, but not enough to improve livelihoods and sustain forests resources and natural resource management. Rural communities need to be able to sustainably manage their lands and forests, and competitively enter the market place for forest goods and services either on their own or in partnership (Seymour et al. 2014). They require the institutional and policy support to do so, and this means moving the debate beyond tenure and forest management plans to sustainable forest management by rural communities.

This paper explores: (i) the process and history of forest tenure reform in sub-Saharan Africa; (ii) how and why powers and responsibilities over forest resources have been decentralized and the extent of Africa's rural communities ability to exercise such powers and responsibilities to improve their livelihoods; and (iii) whether security of tenure over forest resources translates into improved well-being. A synthesis of the evolution of forest tenure in Africa provides an understanding of who really owns Africa's forests and how such ownership shapes forest resource management.

Processes of tenure reform in sub-Saharan Africa

Forest tenure changes in Africa

Diverse histories, laws and forest types have significant bearing on tenure and rights reform. Rights to timber were alienated, but, in many cases, colonial administrations allowed access to forests for lower value forest resources for community subsistence use through systems of permits.

Forestry policies and laws have attempted to integrate customary and statutory norms while adopting contemporary concepts of equity (Wily & Mbaya 2001; Selebalo 2003; Meinen-Dick & Di Gregorio 2004; Alden-Wily 2014). But there is a complexity of overlying recognized and often unrecognized (or under-recognized) rights. At a local level a 'forest' may be managed as part of a customary regime (de facto or customary rights), as in the Loima Forest in Kenya (Barrow et al. 2002). However, in statutory terms such a forest may be under the national forestry authority or be partly held in trust by the local government on behalf of the local community. Such pluralism involves an array of rights, both state and usufruct rights for the local community.

The Congo Basin exemplifies, for many parts of Africa, how forest dwelling communities (Vansina 1990) have lived in these forests and depended on the forest resources (Wilkie 1988; Iliffe 1995). Over the years, agro-industries and mining concessions have led to the degradation of 49.4 million Ha (CBFP 2006; Djeukam et al. 2013) leading to conflict between forest-dwelling communities, agro-industries and mining concessions. This conflict over forest ownership and access to resources between local communities and governments continues (Oyono 2005). The social practices and value systems governing ownership and access to forest resources have fluctuated during the long-standing occupation of the forests of Central Africa (Biebuyck 1963; Le Roy 1987; McKay & Acheson 1987; Bruce 1988).

New forestry policies and laws formulated in Cameroon, DR Congo, Gabon, Equatorial Guinea, the Central Africa Republic and the Republic of Congo Brazzaville (CBFP 2006) take into account the rights of local communities in forest management and access to associated benefits (Karsenty 1999, 2004; Oyono 2007). They are oriented towards decentralization (CBFP 2006; Oyono & Nzuzi 2006), but many such policies are yet to be implemented (White & Martin 2002; Oyono 2007). In Equatorial Guinea, for example, there has been a kind of 'legal regression'. The Property Law of 1984 stipulated that forests allocated to local communities were transformed into 'private village property'. In DR Congo, immediately following independence, all restrictions on community ownership were removed. Post-independence legislations cancelled these 'ownership' rights transfer and all the forests became again central State property. The analysis of forestry legislations and policies in Central African countries shows that the political and economic control of France and Belgium was extensively reflected in the forestry sector and post-colonial policies (Buttoud 1991).

By contrast, Eastern and Southern Africa are decentralizing natural resources rights and management to the local level (Wily & Mbaya 2001; ITTL 2003; Mataya et al. 2003; Nhantumbo & Macqueen 2003; Selebalo 2003; Tanner 2005; Zeidler and Jones 2006/2007; Adams & Palmer 2007). Security of rights may include the formal recognition of customary rights to both individual and community areas together with the recognition of rights of occupancy, as in Mozambique (Nhantumbo 2007). Decentralization of resources in Southern Africa gives primacy to strengthening resource use rights of forests and wildlife, but there is a reluctance to relinquish rights to land, as in Namibian and Zimbabwean conservancies. The call for the

conversion of customary rights in Zambia into leasehold, defended by institutions such as the World Bank, can threaten the tenure security of the majority of the population (Adams & Palmer 2007).

Botswana represents a more progressive case, where resources have been gradually transferred from freehold to tribal authorities, with the State maintaining limited areas (Selebalo 2003; Adams & Palmer 2007). Botswana has been alienating its land in favour of communities through elected land boards and to the private sector. By 1998, over 20% of the land had been transferred, due to strong traditional authorities and customary laws. Botswana, it appears, has succeeded in integrating customary norms and practices with statutory law (ITTL 2003). However, Malawi did the opposite, as communities lost land in favour of public and private landholding categories, and between 1983 and 1990, approximately 104,433 ha had been lost (Mataya et al. 2003). Some countries, e.g. Ghana, Mozambique and Zambia explicitly recognize customary rights, while other countries, e.g. Ethiopia, Mauritania and Rwanda do not afford customary rights any legal protection, as all land is state-owned (Schoneveld 2011).

New forests and land legislation in West Africa recognize ownership by the State, individuals, communities and local authorities. The owners of community and private forests have to respect certain restrictions to guarantee protective forest functions, but have a certain liberty in decision-making, as far as the more commercial plantations are concerned. The most important changes are related to transferring management and utilization rights to local groups. For example, the forest law of Benin provides the option to transfer forest management to adjacent local populations based on a management agreement. While the forest areas may remain State-owned, the agreements specify management practices and the use of the income derived from forest resources. In Burkina Faso, forest management, as part of conservation areas is emphasized, which, in turn, can transfer their management and utilization rights to local groups. In Senegal, the law prescribes that the management of forest areas, other than State-owned forests, should be transferred to local communities.

State, private and communal tenure regimes have been the subject of three main schools of thought (Demsetz 1967; Hardin 1968; Ostrom 1990; Rose 1994; Platteau 1996; Barzel 1997), which all impact on forest ownership. The *Property Rights School* supports individualization and privatization of resources and land, through tradable titles (Ellsworth & White 2004). The *Agrarian Structure School* argues that land should be redistributed equitably, and not to urban and political elites (Ellsworth & White 2004). While the *Common Property School* maintains that if resources, which are common goods, are privatized, the poor who depend on them will be further marginalized, and so they advocate for the security of tenure for common goods (Ostrom 1990; Thompson 1991; Schlager & Ostrom 1992). The approach of *institutionalists* focuses on the politics of access to, and control of resources which can result in contestation, conflict and negotiation in a given institutional and social arena, rather than on the characterization of ownership (Ribot & Peluso 2003). The reality in the landscape is often a mix of approaches and interpretations.

Epochs of change in forest tenure

Forest tenure in Africa has witnessed multiple transformations, or epochs of change (Platteau 1996; Diaw 2005; Oyono 2007), that are classified as: (i) early indigenous communal forest tenure dislocated by migrations; (ii) State as master of land and forest; and (iii) post-1990s

forestry reforms and decentralization. These epochs created similar but nationally different perspectives to the devolved ownership and management of forests to rural people.

During the first epoch, forest dwellers and hunter-gatherers were 'victims' of the first alienation of forest tenure even though they were the first inhabitants (Trilles 1932). Forest dwellers, such as the Batwa, have a system of 'rights and powers to resources and space' that was communal and flexible. Similar impacts were felt by the San people in Southern Africa (Legal Assistance Centre, LAC of Namibia 2006), and forest dwelling peoples of Eastern Africa (Barrow et al. 2002). The early migrations, especially of Bantu and Nilotic peoples, represented the first wave of forest tenure transition (Vansina 1990; Oyono 2007).

At the advent of colonialism, the state became the master of land and forests, and customary 'tenurial' systems were seen to conflict with 'modern' tenure. The French Colonial Decree of 1935 introduced the public forest estate, and divided forests into 'reserved' and 'protected' (Lanne 1982), though such decrees were applied more at the regional levels, and some of these decrees were applied much earlier (e.g. early 1900, Toulmin & Quan 2000; Toulmin et al. 2002), where, for example, '*terres vacantes et sans maîtres*' was declared in 1899 (Décret 28 Mars 1899: Régime des terres domaniales au Congo Français). They created 'State property', and all forests found 'vacant and without masters', henceforth belonged to the State (Coquery-Vidrovitch 1982; Mutamba 1998). Similar approaches were adopted in both English and Portuguese colonial regimes (Tanner 2005). These changes usurped customary rights (Mveng 1984; Boone 2003), though in many cases such rights were recognized either tacitly or through a system of permits for 'those ordinarily resident in the area' (Barrow et al. 2002). The main focus of colonial land and forestry policies and laws was on: (i) expropriation of customary lands; (ii) introduction of land registration; (iii) an emphasis on agro-industrial and private sector plantations; and (iv) support for commercial logging (Oyono 2005).

With independence, African States inherited colonial tenure systems (Platteau 1996). Gabonese forests, for example, were still managed under Decree No. 46-1161 of 1946 up to 1983 (Lanne 1982). Until 2002, the forests of the DR Congo were managed according to the Colonial Belgian Forestry Code of 1949 (Oyono & Nzuzi 2006). In Senegal and Benin the forest code was revised for the first time in 1993, and recently in 1998. Mali, Mauritania and Burkina Faso revised their forest codes in 1997. Niger adopted a new forest law in 1998 (CILSS 2003). Yet few countries improved or changed inherited colonial forestry legislation (Leisz 1996), and policy conditions of post-independence years deepened the exclusion of local communities.

During the 1990s, some Central African countries restructured their forestry policies and institutional frameworks to: (i) recognize the need for secure access rights of local communities; and (ii) transfer or delegate powers over forest resources and financial benefits accruing from commercial exploitation to local communities. Such paradigm shifts to community forests, already in place in Cameroon, are being launched in other countries, and a number of laws and policies were enacted including: (i) Cameroon's Forestry Legislation of 1994; (ii) DR Congo's Forestry Code of 2002; (iii) Republic of Congo's Forestry Code of 2000; (iv) Central Africa Republic's Forestry Code of 2001; (v) Gabon's Forestry Code of 2001; and (vi) Equatorial Guinea's Forestry Code of 2002. Legislation within these codes fosters sharing of rights, but do not change the ownership status. Malawi and South Africa enacted forest policies in 1996, Madagascar, Mozambique and Lesotho in 1997, Zambia and Tanzania in 1998, Namibia in 2001, Zimbabwe in 2001 and Swaziland in 2002 (Wily & Mbaya 2001; Kowero et al. 2003;

Mendelson & el Obeid 2005; Siteo & Tchauque 2006) to strengthen community rights to forest resources.

Burkina Faso's constitution identifies decentralization as the main instrument of development and for fostering local democracy, where four laws provide the legal framework for decentralization, though there has been critique that the country has transferred power without resources. Section 38 of the Forest Code (2011) of Burkina Faso, states that rural communities can manage their forests. However, this met with resistance from formal forest management groups that are codified in the policies of forest management. However, in Burkina Faso decentralization has a constitutional basis and provides for the transfer of the management of natural resources to rural communities in 2008, but by 2014, this transfer is not yet effective (Mawa 2014).

In Senegal, decentralized government has been a de facto situation for many years with devolved units taking up responsibilities of empowering communities to manage forests. These waves of change, culminating in policies and laws that increasingly support community management and ownership provide the strong policy and legal basis for rural people to own, manage and benefit from forests, which makes the actual analysis of forest ownership more nuanced and difficult. In decentralized forest management in Senegal, two forms can be distinguished (Faye 2014): (a) top-down where the Forest Service supplants and does not recognize local elected governments, and (b) bottom-up where elected local governments resist by not recognizing project-supported committees. Political recognition is likely to occur when local government begins to realize that control over forests and access to institutions is a means for responsiveness and maintenance of their authority over the forests (Faye 2014).

Security of forest rights – who really owns the forest?

FAO (2005) and the Rights and Resources Initiative (2014a) provide comprehensive accounts of 'official' forest ownership. However, these data do not necessarily take into account customary forms of forest ownership or forests which are de facto community forests (Grainger 2008).

Forest tenure in Central Africa remains a mix of indigenous use and management, and formal legislation and regulations. Forests are governed by the *'régime de domanialité'*, which in reality means state ownership (Oyono 2007). Some countries of the region distinguish the 'public domain' from the 'private domain', with some having a specific category titled 'national domain'. The 'public domain' differs from the 'private domain' in that resources are for everyone's use, while those in the private domain are owned by public bodies (CBFP 2006). The national domain in Cameroon is a collective asset controlled by the State, for which private appropriation is possible, and is considered by the State as 'vacant', and is part of customary property (Bigombé 2007). Public ownership (i.e. state-owned) in Cameroon relates to the 'permanent forest domain'. The 'non-permanent forest domain', though intended for communities and other forests (e.g. individually or privately owned forests) remains under state control. But the case of Cameroon is rare in Central Africa, as it is the only one to have decentralization (although the DRC is in process) and one of the few with community forests.

Southern Africa's 36% forest land includes plantation, intact and mostly modified natural forest, and woodland with an annual loss of about 1.7% due to unsustainable harvesting,

expansion of agricultural land and use of fire for land clearing (FAO 2005). Large areas of productive and multiple use forest and woodlands are gazetted for conservation ranging from 36 to 41% in Namibia and Madagascar, and 2–3% in Mozambique and Zimbabwe (FAO 2005). While communities may protect biodiversity rich areas, this is not clearly represented in official statistics regarding protected areas, and the majority of people are alienated from the benefits of such areas. Mozambique and South Africa have pioneered resource devolution to local communities by strengthening rights to land and forests. Stronger rights to resources have been secured by communities, but these rights are weaker in Zimbabwe and Namibia (Brosius et al. 2005).

Understanding ‘designated functions’ of forests (FAO 2005) can improve our understanding on where de facto rights to use, manage and have control over resources are better integrated. Wily and Mbaya (2001) present data on gazetted and non-gazetted forests, from which forest tenure can be inferred. Inferred ownership is based on the assumption that the private sector has more access and control over productive forest resources, and has the technology and financial resources to add value to resources, contribute to economic development and invest in sustainable management. This is a common provision in forest policies, e.g. in Malawi, Mozambique, Tanzania and Zimbabwe (Kowero et al. 2003). In Mozambique communities are eligible to forest concessions, while in other countries, e.g. Zambia and Malawi, such access is through joint forest management. However, there are a number of challenges relating to the private sector and land tenure reform (Rights & Resources Initiative 2014b).

Table 1 summarizes ownership patterns in Africa based on FAO (FOSA 2003; FAO 2005) and other data-sets (Kamugisha-Ruhombe 2007; Nhantumbo 2007; Oyono 2007; Savadogo 2007), and Table 2 provides a recent summary update (Rights and Resources Initiative 2014a) where less than 6% in the sample are designated as owned by indigenous peoples and local communities (and 89% of that area is accounted for by Tanzania in the 12-country sample). For Southern Africa the sources and assumptions are explained in Nhantumbo (2007), and includes a combination of assessments, e.g. the FAO data-sets; a greater understanding of de facto ownership (especially of lower value forests) by communities; extent of decentralization of rights to forest management; forests that are potentially available to communities;

Table 1. Regional summary of who owns Africa’s forests (2007).

Forest type (millions of ha)	Central Africa ^a	French West Africa ^b	Eastern Africa ^c	Southern Africa ^d	Totals
Public-administered land by government	1368.282 (99.96%)	41.951 (97.6%)	127.39 (96.8%)	76.231 (36.0%)	613.854 (81.3%)
Public-reserved for community and indigenous use	0.621 (0.04%)	0.761 (1.8%)	1.624 (1.2%)	121.308 (57.3%)	124.314 (16.5%)
Private-community and indigenous people	0	0	0	3.594 (1.7%)	3.594 (0.5%)
Private-individual and companies	0	0.251 (0.6%)	2.621 (2.0%)	10.427 (4.9%)	13.299 (1.7%)
<i>Totals</i>	1368.903	42.963	131.635	211.56	755.061

Sources: Nhantumbo (2007), Oyono (2007), Savadogo (2007), Kamugisha-Ruhombe (2007), FOSA (2003), and FAO (2005).
^aBurundi, Cameroon, Central Africa Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon, Republic of Congo, Rwanda.

^bBurkina Faso, Mali, Senegal, Togo, Cote d’Ivoire, Mauritanie, Niger.

^cSudan, Djibouti, Somalia, Somaliland, Ethiopia, Kenya, Uganda, Tanzania.

^dAngola, Botswana, Namibia, Zimbabwe, Zambia, Malawi, Mozambique, South Africa, Lesotho, Swaziland.

Table 2. Statutory forest tenure changes in Africa (2013), based on 12 sub-Saharan countries^a.

Type of tenure	2002 Figures (%)	2013 Figures (%)
Government administered	95.5	93.7
Designated for indigenous peoples and local communities	4.2	5.9
Owned by indigenous peoples and local communities	0.3	0.3
Owned by individuals and firms	0.0	0.0

Source: Rights and Resources Initiative (2014a).

^aTanzania, Gambia, Cameroon, Central Africa Republic, Democratic Republic of the Congo, Gabon, Republic of Congo, Angola, Togo, Ethiopia, Kenya, Zambia.

Table 3. Differing perspectives on public forest tenure distribution in Africa (2007, 2008).

Country	Statutory % (government administered)		Customary % (based on forest function)	
	Who owns (Sunderlin et al. 2008)	This paper (Nhan-tumbo 2007)	Who owns (Sunderlin et al. 2008)	This paper (Nhan-tumbo 2007)
Angola	59.73	5.04	0.00	47.98
Zambia	42.44	11.17	0.10	31.29
Mozambique	17.26	33.60	0.00	11.70

and the extent to which local government forests are multi-purpose and reserved for communities. Local communities use customary norms to lay claims on land and forest resources through recently adopted policies and laws, and significant forest areas are 'reserved' (57%) for local communities through ongoing devolution processes. Clearly, there is need for a more detailed and nuanced analysis of forest tenure. This need is highlighted for three countries in Southern Africa (Table 3) which appear both in Ntantumbo (2007) and in Sunderlin et al. (2008).

Eastern Africa is socio-economically and ecologically diverse. Forest distribution is skewed, with Ethiopia and Djibouti having a low forest cover to over 40% for Tanzania (FAO 2001). Tanzania offers good lessons, as the Forest Act (2002) used the Land Act (1999) and Village Land Acts (1999) as the basis for creating various forms of community involvement (Akida & Blomley 2007). The Tanzania Forest Act (2002) provides for local communities or individuals to jointly manage Central and Local Government Forest Reserves through Joint Forest Management agreements, and to have their own gazetted Village Forest Reserves, which are managed by Forest Management Committees (Akida & Blomley 2007). In Uganda forests referred to as 'private' are on land under both private and customary ownership, as the National Forest Plan (2002) distinguishes between forests owned individually or institutionally under freehold and leasehold tenure, and those owned communally under customary tenure.

In Ethiopia, State, regional and private forests are recognized (Forestry Proclamation No. 94/1994). Kenya remains committed to individual or group ownership, through the formation of community forest associations to manage shared forests. While these associations are responsible for diverse management activities in forest protection, monitoring and management, access to decision-making, revenue streams and overall resource control rights are still vested in the Kenya Forestry Service (Mogoi et al. 2012). Djibouti and Sudan have maintained private land ownership policies since independence. Sudan has forests under private and public ownerships (FAO 2005), and is one of the few countries which include dry woodlands in their forest statistics.

In Zambia, 300 forests are exploited by local people, with 60 Community Resources Boards established in 34 areas, while 181 forests are reserved for logging (Forest Department Zambia 2007).

There are 13 community forests of Namibia (Mendelson & el Obeid 2005), and over 60 forest-based initiatives in Mozambique (Foloma 2006). While Cameroon has 156 community forests (Oyono 2007), and Tanzania has 329 declared Village Forest Reserves, with over 1100 villages in process, and a further 531 villages with Joint Forest Management Agreements (Forestry & Beekeeping Division, Tanzania 2006).

The legislation in French West Africa recognizes State, private and community-owned forests. Legal reforms to facilitate community natural resource management has been limited despite strong emphasis on the '*terroir villagois*' (Bruce 1999), or village territory. Forest codes have been critiqued for their failure to provide an adequate legal basis for community forestry, and for undermining incentives for tree planting on private land. But there is a general trend in French West Africa to decentralize forest management, based on lessons learnt from the '*terroir villagois*' approach, for example, in Cote d'Ivoire, Burkina Faso, Mali and Senegal (Duchochois 2000). In Burkina Faso, the creation of participatory forest management allowed for the creation of cooperatives in villages surrounding a number of forest areas, e.g. the Nazinon forest (Ribot 1999); the co-management of Kabore Tambi Park (Wily 2002); and Sablogo forest (34,000 Ha and 20 villages) where small improvements in the 'way things are done' has positive impacts on both livelihoods and forest status (Barrow et al. 2012; IUCN 2012).

Civil society advocates for the formal recognition of traditional rights to land and forests and their inclusion in existing legal frameworks, as well as the transfer of substantive rights to beneficiaries of different natural resources. Traditional community rights, especially of forest-dwelling communities were largely expunged and such groups are often considered 'illegal squatters' in their own lands. Nevertheless, in Cameroon, DR Congo, Rwanda, Burundi and East Africa, networks are organized around issues such as access to forest resources, benefits and the defence of local communities and forest minorities' rights to forests. But the strength and balance of civil society compared to the State varies. Where it is strong, e.g. Southern and East Africa and some parts of West Africa, there has been greater movement towards increased decentralization of natural resources management. However, decentralization was often imposed as a condition of overseas development assistance. This happened in Cameroon and is the reason for the 1994 Forestry law.

There is increased recognition of community forest ownership, but this is expressed differently, due, in part to the focus by State authorities on 'official' State forests, and to a lack of recognized data-sets for other 'non-reserved' forests. Such a lack of understanding and clarity creates a basis for contested and overlapping rights. Yet more secure tenure or user rights can be achieved through management and access agreements, tree registration, licensing (IUCN 2012). But, despite these differences, even in countries where customary rights are protected by law, this rarely translates into full tenure security (Schoneveld 2011). Overall, African states have retained control of high-value forests and made it difficult for communities to market high-value timber and other goods and services. The legal status of systems of customary tenure differs greatly between countries. As a result of various governance shortcomings, customary land users are seldom consulted or requested to acquiesce to land alienations, typically with detrimental implications for livelihoods and social identity.

Does security of tenure over forest resources translate into improved well-being?

Forests contestation

Pre-colonial, colonial and post-independence forest management structures set the scene for contestation between government and communities, because decision-making was centralized from customary authorities to the state, and local rights and responsibilities were largely curtailed or removed. For example, in Uganda, 35 gazetted forests were contested due to settlement, farms, urban expansion, industry, grazing, water, oil palm and sugar cane plantations (Kamugisha-Ruhombe 2007). The government proposed to allocate over 3000 ha of Mugoye Forest Reserve (Kalangala Islands) for oil palm plantation, degazetted 1000 ha of Namanve Forest Reserve for industry and nearly allocated 7100 ha of Mabira Forest Reserve to a private sugar cane company (Kigenyi 2006). Indeed land for oil palm plantation has risen rapidly, e.g. Liberia, Sierra Leone and the Republic of Congo, totalling 1.8 million ha (Wunder et al., 2015).

Now sub-Saharan Africa is a target for large-scale land acquisitions for plantation agriculture and forestry. Such investments can provide capital for Africa's ailing land-based economies, but they carry a myriad of socio-economic and environmental risks (Schoneveld 2011). One of the main drivers for these acquisitions was found to be the perception of a long-term demand for biofuels in industrialized countries and agri-business. The seven countries (Ethiopia, Ghana, Liberia, Madagascar, Mozambique, South Sudan and Zambia) where more than 1 million ha have been acquired constitute 65.7% of the total area acquired (Schoneveld 2011).

The San people continue to be marginalized more than a decade after independence in Namibia (Legal Assistance Centre of Namibia 2006), though some San communities in Angola have received title to the territories they customarily use. Displacement continues with the establishment of protected areas which overshadows otherwise progressive policies and laws (Adams & Palmer 2007). Although policies may recognize customary rights, negotiation and fair compensation for compulsory acquisition, the reality is that the State uses powers of eminent domain, and public interest to undermine such provisions. There is also a lack of political will and momentum to recognize local and indigenous rights, and even if such rights are recognized, implementation is challenging.

Restricting access encourages degradation and contestation which exacerbates the demand for tree products, and so drives unsustainable forest harvesting. Community-based forest management in, e.g. Madagascar, Mozambique, Malawi and Zambia can reduce resource degradation by recognizing rights, boosting resource ownership and fostering employment creation. Where communities do not have ownership rights or control over productive forests, conflicts and degradation persist (Katerere 2000; Mudekwe 2005). The denial of access to resources by local communities, while issuing permits to outsiders to harvest will be challenged through unsustainable use of resources, irrespective of existing legal restrictions (Campbell et al. 2000). Right holders can gain from secure tenure rights that underpin resilient local economies.

Yet there are changes as locally controlled forests involve approximately 1 billion people and one-quarter of the world's forests. They provide \$75–\$100 billion per year in goods and services, and offer investors secure access, a 'social license to operate', reduced risks and better long-term management opportunities (Elson 2012). But alliances with the private sector are not without risks, where the balance of initial support and long-term limitations

maybe hidden within company–community partnerships, especially if local enterprises are not yet strong enough to attract their own investment (Elson 2012).

In Central Africa, community contestation of colonial and post-colonial tenure rights structures followed social, political and symbolic types of action (Diaw 2005; Bigombé 2007; Oyono 2007): (i) rejection of the colonial mode of territorial management, with local elites protesting in the colonial period against the draconian procedures to expropriate ethnic land; (ii) protests against the creation of protected areas and State forest reserves; (iii) issuance of financial compensation when there is expropriation, e.g. roads construction and the Chad–Cameroon pipeline; (iv) protests about forests under commercial exploitation and claims for benefits; and (v) installation of agro-industries on customary lands.

Sustainable development is intrinsically linked with land issues, and emphasizes the urgency of restoring lost rights (Matowanyika & Marongwe 1998; Toulmin & Quan 2000), as land and other resources are usually vested in the state, the president or the king which perpetuates a legacy of neo-colonization. This may be convenient, but sets the scene for contestation. Providing usufruct rights to resources rather than ownership to land protects current or future interests of government, rather than supporting local rights, and will only exacerbate contestation and inequity. Secure local rights together with the responsibilities attached are required, and can be supplied through tenure reform and decentralization.

Are secure rights enough for decentralized forest management?

Secure rights of control, access, tenure and use provide the foundation for decentralizing forest management. But they are not enough, if communities and rural people cannot manage the forest (Table 2). Neither secure rights nor decentralization are a panacea (Ostrom 2007) for sustainable forest management or improved livelihoods. Generally resource use and management rights are devolved cautiously by government through the use of government approved, and often overly complex management plans, permits and restrictions on access to valuable resources. Simultaneously, poor governance often prevails particularly at the agricultural frontier. Land and resource tenure is often insecure and overlapping, promoting conflict and impeding investments (Wunder et al., 2015). Here, policy leverage needs to focus on levelling the playing field, and promoting decentralization and fairness in resource access rights (Agrawal et al. 2008). According to Jones and Murphree (2004), natural resource devolution is undermined by:

- (1) providing for rights to use natural resources and not rights to land (e.g. Botswana and Namibia);
- (2) absence of rights of exclusion of livestock from wildlife management areas (e.g. Namibia);
- (3) government retaining portions of income (e.g. Zambia and Zimbabwe); and
- (4) the presence of an intermediary body with significant representation of government at local level termed the 'appropriate authority' (e.g. Zimbabwe).

State authorities may use various means to exert control over decentralized forest management, including: (i) requirement for formulation of overly complex forest management plans (e.g. Kenya); (ii) restrictions on use of certain species through permits (e.g. harvesting *Faidherbia albida* in West Africa); (iii) retaining the ability to revoke agreements (e.g. Cameroon); and (iv) placing perverse incentives (e.g. taxes and permits) for rural people to engage in the market. In Southern Africa, communities may have *de jure* rights to harvest

valuable timber, but in reality (due to complex procedures) are only entitled to non-timber forest products (e.g. Malawi, Madagascar, Mozambique and Zambia).

The strength, robustness and legitimacy of local institutions for forest management are key to successful decentralization, together with the ability of local people to take on their rights in land and forests (Table 4). This is one reason why Village Forest Reserves in Tanzania have been successful (Akida & Blomley 2007). Local institutions provide efficient means for monitoring and sanctioning (Ostrom 1990; Bromley et al. 1992). However, the establishment or strengthening of existing community institutions encounters challenges including:

- defining boundaries which can lead to resurgence of otherwise dormant conflicts;
- the extent to which such institutions are officially recognized;
- introducing democratic systems can conflict with traditional authorities;
- realizing that communities are not homogenous in terms of intra-power relations; and
- recognizing gender equity, representation where equal representation does not necessarily mean equal participation in decision-making.

Decentralization of forest resources has been mainly over low-value forests, as high-value timber concessions are earmarked for the private sector. In Mozambique, the policy explicitly provides for community concessionaires, yet by 2007, there were none in existence, due to complex and costly requirements both for resources management and value addition. Namibia is devolving the management and control of forests with high-value timber species to local communities, but there is a challenge of community capacity to maximize revenues through informed negotiation with private operators.

The degree of understanding and appropriation of the achievements of decentralization of natural resource management by local institutions is narrow and limited. These institutions may not have the necessary technical and organizational capacities to determine the challenges and reasons behind decentralization or may not be able to identify, capitalize on and integrate its achievements in the dynamics of their functioning as well as being able to optimize on the benefits. Though there are good examples, decentralization has not achieved the potential it could have. Though land rights may be clearer, many institutional and administrative impediments are in place under the guise of 'ensuring that the forest is properly managed'.

A major CIFOR series of studies in 80 forest commons in 10 countries, demonstrated that community forestry and other arrangements with high local rule-making autonomy, together with larger forest size, are more likely to produce scenarios with both high subsistence livelihood benefits and forest conservation (Wunder et al., 2015). Ill-enforced rules and lack of congruence between owners (i.e. the state) and users (i.e. local people) may give smallholders better, but not legal access to extract higher forest incomes (Jagger et al., 2015). Caution is needed in terms of unequivocal advocacy for tenure reforms towards clear congruence and high enforcement, as pre-existing complex and often 'muddled' institutional arrangements may sometimes prove to actually favour smallholders (Wunder et al., 2015).

Gender and equity

Poverty has distinct strata in terms of men and women who suffer discrimination on rights to property, inheritance, tenure security, equal access to productive assets (land, credit and technology). Botswana recognizes land rights for women (ITTL 2003) as women are the

Table 4. Contrasting tenure and benefit regimes (to 2008).

Country	Legal context	Community 'ownership'	Community benefits and issues
Burkina Faso	Forest Code 1997	Can delegate to rural councils; but fuel permits issued by government	Community forest groups need to have forest management plan – fuel wood and NTFPs. Community rights in more marginal forests; balance social and conservation needs
Cameroon	Forest Legislation, 1994	Community forests for periods of 5 years and renewable up to 25 years	Sale of timber and NTFPs. Community forests seen as on 'loan' from government and management rights can be withdrawn. Good economic and financial value. 15 community forest agreements suspended so far
DR Congo	Forest Code 2002	Village community can create and manage village community forests	Sale of timber and NTFP. Not implemented yet
Mali	Forest Law 1994	Responsibilities of rural councils which can delegate to rural woods management structures	Conservation of forests, emphasis on fuel wood and NTFPs. Community rights mainly in more marginal forests
Mozambique	1997 Forest Policy	Communities can formalize rights to land and to resources	Government shares 20% of revenue from royalties to communities. In 2006 over US \$1 million generated. Several income generating activities
Namibia	2001 Forestry Development Policy	Nearly 70 initiatives and over 200 communities granted formal land rights Usufruct rights provided. Quota for wildlife. Forest use based on management plans. 31 conservancies and over 60 expected to be established	Generated US \$1.4 million in 2003 mainly from wildlife, but also timber products (approx. \$14 p.p.), provision of permanent and temporary employment
Senegal	Forest Law 1994	States can delegate to lower levels including local government	Mainly fuel wood and NTFPs; Community rights in more marginal forests
Sudan	1986 Policy, Forest Law 2002	Contractual partnerships with communities especially in restoration (e.g. Gum Arabic)	Gum Arabic (and other resins), part of agro-forestry system
Tanzania	PFM strategy, Forest Act	Joint forest management and village ownership. Harvest for own use, and sale	Sale of timber, NTFPs. Paying taxes contested. Village responsibility for management and patrol
Uganda	Forest Policy and NFP (2002); Forest Act (2003); Land Act	Collaborative forest management and communities are a 'responsible body'. Local forest reserves decentralised. Communal land associations can manage natural resources, including forests	Revenue sharing, access forest products for domestic use, eco-tourism. Community involvement strong where there is access to one or more forest products for domestic use or sale. Collaborative management of forest national parks with significant benefits

Sources: Amanor (2003), CILSS (2003), Dorlöchter-Sulser et al. (1997), Kone (2001), Ministry of Natural Resources and Tourism of Tanzania (2006), Ribot (1998), (2000), Wily (2002), Mendelson and el Obeid (2005), and Wirbelaeur et al. (2005).

critical link in achieving food security, and land is a significant factor in household food security. However, lack of control over land and resources limits women's ability to make management decisions on trees and agroforestry, securing credit using land as collateral and having access to extension services, training, marketing and membership to co-operative societies (Nzioki 1995).

There is some effort to promote equity and gender in land and tree tenure, but merely legislating for women's rights is not enough. Information access is limited by the persistent argument by decision-makers that granting rights to local communities is not sufficient, since they lack capacity to manage forests, which then becomes a circular and self-enforcing argument.

Gender-differentiated use of resources in the CIFOR Poverty Environment Network studies (Wunder et al., 2015) managed under different tenure regimes, reconfirmed expectations that many forest products are harvested from State lands, but men have a higher participation in forest user groups, and tend to dominate forest management organizations. The IUCN Environment and Gender Index provides a structured summary as to how effective external interventions are in supporting and encouraging women's participation in such organizations (IUCN 2013; Jagger et al., 2015).

Most countries embrace gender equity, at least at policy and legal levels, but this needs to be reconciled with custom and attitude, as male dominance is still pervasive. Many women's rights in forests are ignored or hidden, as many women's rights of access and ownership to land and forests is still embedded in traditional, religious and cultural beliefs (Nyamu-Musembi 2006). Decentralization can create the space for shared agreement on forests at the local level. But many forestry and local authorities still impose restrictions on the ability of local people to gain and defend their rights. Responsibilities may be devolved, but it may be difficult for rural people to benefit from their rights in forests, aside from less valuable non-timber forest products. So, it is important to resolve issues of forest tenure relating to power, accumulation, elite capture, survival and justice and how customary rights are treated, including the evictions of local and indigenous people, for instance, in Botswana, Kenya and Namibia.

Gender equity in access and security of tenure over forest resources is yet to be achieved. Many shortcomings impede this, including lack of transparency, accountability, local sanction and elite capture. Inherent prejudices of customary laws, norms and practices still pervade and define the inheritance of assets and influence the type of institutions and norms that have to be put in place to facilitate effective participation and management of forests. Rural women's responsibilities are disproportionately related to their legal status, and their formal rights to land, trees and products. As tenure policies are being revised, factors that need to be taken into account include the bundling of rights to include women's rights and access, and a clarification of women's legal access in customary and statutory laws and practice (Barrow et al. 2009).

Tenure, forest rights and poverty

High levels of poverty have implications on the forest sector including a heavy dependence on forests, and non-timber forest products which contribute to income generation at the household level (Njuki et al. 2004; Oyono et al., 2015). Employment and income generation from the commercialization of wood and non-wood products show how natural resources contribute to rural economies. Securing community rights to forests coupled with value addition may foster more sustainable management provided that the 'forest and tree' continue to be of real or improved value.

Different countries in Africa are in different phases of decentralized forest management and have different abilities to enter the market (Barrow et al. 2009). Representation of the forestry sector in the national accounting systems is inadequate (Table 5). In comparison with the amount of money generated by forests in Cameroon, for example, the contribution of forests to poverty reduction and human well-being is low, due to lack of secure rights, equity in distributive mechanisms, transparency and information on the potential strategies (Oyono et al., 2015). Adequate accounting and reflection in national accounts can improve the understanding of the value of forestry resources to economic growth, its sustainability

and to poverty reduction. The forestry sector contribution to livelihoods is significant and deserves more prominent reflection in strategies to reduce poverty. Poverty Reduction Strategies of Zambia, Malawi, Lesotho, Tanzania and Mozambique highlight the importance of tenure and rights security, while Angola recognizes the importance of sustainable harvesting of forests and the involvement of communities in conservation and benefit sharing and gender equity.

In Africa, rural communities have traditionally relied on trees and forests for provision of subsistence goods, including forests foods, fuel wood, herbal medicine, fodder and construction materials. For resource-poor populations, access to forests is particularly critical during periods of drought and other times of stress. Forests are a safety net to resource-poor populations.

There is a slow shift from public to private sector forest management (FAO 2003). South Africa, Uganda and Kenya promote private sector involvement in plantation forestry. The private sector licence in Uganda includes a clause preserving existing local community rights in the forests. In Sudan, the creation of the Forest National Corporation (FNC) led to greater private sector involvement in forest management (FNC 2003). Opportunities for the private sector include community partnerships and alliances (timber and non-wood products, as well as for sustainable, fair trade and organic labelling). However, challenges include: (i) resource-poor populations may not be able to engage equitably with the private sector because of capacity challenges; (ii) lack the capacity to devise and use technologies to process, value-add and market NTFPs, as alternative income streams; and (iii) poor regulatory frameworks, lack of start-up financing and lack of government incentives.

There are an array of arrangements for community involvement in forest management from permit-based access for minor forest products, collaborative forest management of state-owned forests, to community-owned and management of forests. This continuum helps ensure that the managing agency and the benefiting communities are accountable to each other and provides one entry point to promote tenure security. Uganda has created mechanisms for community forest management, e.g. in Budongo, Sango Bay, Echuya, Kasyoha-Kitomi and Mabira forests. Tanzania Forest Act (2002) mandates forest management to National, Village and Local Authority Forest Reserves to formalize strong community management (Akida and Blomley 2007). But, because of a general reluctance to implement law and policy that support community forest tenure and decentralization, many forest authorities impose complex conditions on communities, before they can engage.

Most countries richer in natural forests do not achieve expected gains because of uncoordinated extraction, lack of value addition and unclear rights and responsibilities for forest management. For example, the herbal remedy trade in KwaZulu Natal in South Africa involves approximately 16,000 collectors and is worth over \$10 million annually (Mander et al. 1996), but most of this income accrues in the urban not rural areas, similar to the charcoal commodity chain in Senegal (Ribot 1998). The expectations for income generation from forest programmes have not always been met, due to:

- the disjunction between short duration projects and the time required to establish viable businesses, based on secure tenure, or rights, or both. This is particularly relevant for NGO projects, as government sometimes have a longer term perspective;

- most forest-based community initiatives may provide security of rights and demonstrate the potential for economic activities, but the investment in technology and business skills is not adequate;
- the scale of production and securing viable markets are challenging, especially if the forest resources are of low-value compared to the high-value timber exploited by the private sector; and
- disconnects between developing the interest in community management, and the ability to develop the products of such management into viable businesses.

Forests and trees play a major role in rural livelihoods, especially for the poor, but the economic potential needs to be realized and acknowledged. The role of forestry in poverty alleviation should be seen in terms of (i) provision of subsistence goods, where rural people have relied on forests for foods, fuel, medicines, fodder and construction materials. Access to forests is critical in terms of their important safety net functions; (ii) income generation through value addition as a means to create wealth; and (iii) formal sector employment as a source of employment and income.

Public sector forest management has gradually shifted to private sector forest management, e.g. in South Africa, Uganda and Kenya, and there are opportunities for private sector–community partnerships (timber and non-timber forest products), as well as for sustainable, fair-trade and organic labelling. The challenge is to use innovative technologies to process, add value to and market non-timber forest products, which can provide alternative incomes that make a wider economic contribution (Barrow et al. 2009).

Conclusion: rights matter

Recognizing communities and indigenous people's rights is essential for advancing human rights, alleviating poverty and conserving the forest. In many countries, efforts to resolve local, indigenous and wider claims to the ownership of forests are in their infancy, though governments are increasingly conferring rights to, or the outright ownership of forests to households and local and historical entities (Azevedo et al. 2014).

Decentralization of rights to natural resources, use and management to the local level is a major policy opportunity for accelerating economic growth and bringing communities to the mainstream of the economy. Some governments recognize the importance of forestry in poverty reduction, but most under-play this importance to subsistence livelihoods, and not as a means to create wealth. It is important to accompany the recognition of rights with the supportive regulations to encourage sustainable use and capacity building of both communities and governments regarding their new rights and roles (Azevedo et al. 2014). In all cases, new policies and capacity-building are required to enable people to take advantage of their new rights to forestlands, and here public forest agencies must help lead the transformation of forestland ownership and tenure (Azevedo et al. 2014).

Many activities related to rights, responsibilities, tenure and capacities are long-term processes. For example, the success of the Shinyanga forest restoration in Tanzania (Monela et al. 2004; Ghazi et al. 2005) over a 25+ year duration was due to the long-term approach that combined capacity building, security of rights and responsibilities, that provided the stimulus for restoration, which then led to significant benefit flows. This was the foundation for the longer success of the Shinyanga work. Economic growth, private sector investment and poverty alleviation should be

Table 5. Importance of forests to people in Africa (to 2008).

Country	Forests and GDP	Economic value of forests	Data on households depending on forests
Angola	1.8%	Value of minor forest products equivalent to 30% GDP	Sector employs 4000
Botswana	0.8%	Timber products \$15 mill p.a. NTFPs \$10–26 mill p.a.	Employs 2000
Cameroon	8.9%	56 communities benefit annually from between \$2840 (low value) to \$45,740 for high value forests. Communities in 30 rural councils were entitled \$4,500,000 in 2006	Employs 20,000 full time. 75% of household revenue generated by forest in rural areas (2006)
Eritrea		29% economic value of country's biological resources, \$72.2 mill p.a. 150,000 bee hives managed in forests	90% depend on fuel wood; also gums and resins
Ethiopia	1.8%, but estimates up to 10% GDP from forests	Forest industry 2.8% of agriculture sector; 3.7% share of agricultural GDP (which is 49.7% of GDP). Drought every 3–4 years	59% of forestry sector for fuel wood; 34% for gums and resins, and afforestation
Kenya		1% monetary value, 13% non-monetary value. \$350–\$450 per hh p.a. for Mau forest and over \$100 mill p.a.; \$160 Kakemega forest; \$135 – Arabuko Sokoke; \$213 for Mt. Kenya; \$285 for Aberdares; \$100 Oldonyo Orok (all per hh p.a.)	530,000 hh live within 5 km of forests and depend on them
Mozambique		Community revenue from timber royalties \$1 mill (for 700 communities) in 2005, and \$1.6 mill in 2006 for 956 communities	
Namibia	3% of GNP including NTFPs (Gov figures); FAO – 6%;	983,000 m ³ fuel wood for domestic use; and 100,000 m ³ for commercial uses; 240,000 m ³ of charcoal and 316,000 m ³ of wood for construction sold. Value of Devils Claw \$10 mill per annum. over 1500 directly employed	89% rural households use wood for cooking, (in urban areas 20%);
Sudan	10%	\$650 mill p.a. value of Gum Arabic \$80 mill p.a. 70% of fuel wood from forests (\$570 mill for charcoal p.a.)	66.7% people involved in forestry (Gum Arabic)
South Africa	2% (plantations) or 1.7% (FAO figures)	\$4674 mill per annum of which 55% NTFPs. Direct use values of NTFPs vary \$750–\$8500. Medicinal Trade in KwaZulu Natal worth \$10 mill p.a.	Over 325,000 people employed
Tanzania	3.3, and 10% of exports	\$56 mill p.a. employs 3%; Economic value of restored woodlands in Shinyanga (830 villages, 2.25 million people) \$14 per person per month – nearly 1.5 times the rural average for Tanzania	92% depend on fuel wood
Uganda	2% (Ministry of Finance) and 6% (forestry sector)	Forest business worth US \$165 million (30% – non monetary). 90% Energy fuel wood from trees	90% of herbal remedies in rural areas
Zambia	FAO figures 3.9%	Potential 17%	Sector employs 6000
West Africa	4.9% of GNP and 25% of export (Mali); 2.8% of GNP (Benin, 2.3% – fire wood, 0.1% – charcoal, and 0.4% – other products)	Value of fire wood \$94 mill (Burkina Faso); Value of wood \$298 mill (Cote d'Ivoire), \$92 mill (Niger), \$15 mill (Senegal); Value of NTFPs \$6 mill (Niger), \$3 mill (Senegal), \$5.5 mill (Burkina Faso); Value of forest products \$140 mill (Mali), 20–60% of household budgets (Mali)	Sector employs 6273 permanent and 60,000 temporary (Burkina Faso); employs 33,662 (Cote d'Ivoire); employs 768 public and 7710 private (Niger); employs 12,700 (Senegal)

Sources: FAO (2004), MINUA (2006), Oyono et al. (2015), Karanja et al. (2002), FAO (2001), Bekele (2001), Mogaka et al. (2001), www.fao.org/forestry/site/22060/en/ken/, Emerton (1996a), (1996b), (1996c), DINATEF reports, (2007); Nube et al. (2006), Mendelson and el Obeid (2005), Wirbelaeur et al. (2005), FAO (2001), World Bank, WWF (2002), Shackleton and Shackleton (2004), Mariki et al. (2001), Monela et al. (2004), www.fao.org/forestry/site/22060/en/tza/, Ghazi et al. (2005), Ministry of Water, Lands and Environment (MWLE) (2001), NEMA (2001), Nkonya et al. (2004), Forest Department Zambia (2007), FOSA (2003), and FAO (2005).

complementary. So simplistic revenue handouts (e.g. from benefit sharing, concession fees) do little to promote self-reliance. The answer is more than decentralized rights and responsibilities, and more than 'managing' the forest. It lies in the ability and capacity of rural communities to invest and enter the market on a fair and competitive basis. This requires longer term investment, requires cross-sectoral dialogue and goes beyond the forest sector to demonstrate contribution to subsistence and wealth creation.

Forest decentralization has been mainly applied to low-value forests, as the State tends to retain control of high-value forest and high-value timber concessions are earmarked for the private sector. Income flows from timber concessions go to the state, and there is a lack of willingness to decentralize such forest lands to either co-management or community ownership regimes (Barrow et al. 2009). Rural communities need rights to, and responsibilities for the sustainable management of forests, be able to decide on the value of such resources, identify enterprises, seek financial and technical support for developing such enterprises, and establish and nurture sustainable institutions that assure more equitable benefit accrual.

One of the objectives of this synthesis was to see how official statistics reflect decentralization of rights and responsibilities. There is no clear indication that this has happened beyond policy rhetoric with some exceptions. This does not mean it is not happening, but that the quality of data is poor. The data on community forests are poorer, where the literature is mostly 'grey', and not included in official statistics. There is really no reason why community forests should not be acknowledged and registered as the private group-owned property of communities (Alden-Wily 2011).

Is security of tenure over forest resources translating into improved well-being, particularly of communities dependent on the resources and coincidentally often living under extreme poverty? In cases where security of tenure has been strengthened, communities have actively participated in forest management. Where land is strongly controlled by the state, communities may participate in forest management activities, but do not invest. It is claimed that forest tenure reform provides rural people with rights to access and use of forest resources, and that this also contributes to improved forest management and poverty alleviation. But, at least with respect to poverty alleviation, there are few experiences with forest tenure reform that have demonstrated this to date (Fisher et al. 2012). However, more modest locally negotiated changes and local 'informal' arrangements can lead to improved access to forests and provide people with the confidence that enables them to invest time and resources in forest management, for example, tree registration in Ghana, piloting joint forest management (Fisher et al. 2012)

The failure to provide adequate support to build the capacity (technical, financial, managerial, etc.) of communities is a threat to decentralized forest management. Governmental systems that effectively engage citizens in forestry make more resilient and sustainable decisions because of the trust and support that inclusive governance brings (Azevedo et al. 2014). There is a growing literature in support of the proposition that strong indigenous and local tenure is associated with forest management outcomes that are at least as good or better than outcomes for areas owned and managed by the State, such as protected areas (Seymour et al. 2014). Unless there are real changes in the livelihoods of communities, decentralization will remain rhetoric. The significance of particular tenure rights (e.g. alienation, regulation and use) could be assessed distinct from their aggregated 'bundles' and could illuminate the relationship between customary and statutory rights and the impacts of government regulations on community-managed lands (Seymour et al. 2014).

Forests and woodlands should be managed and owned, if not by communities (*de facto* or *de jure*), then by other private interests. This will support the State forest sector in its national objectives. Inevitably, however, there will be different land arrangements, such as private or common property, and to reach agreement on which works best in any given situation demands 'landscape level' negotiations and trade-offs that are actually supported in policy (Barrow 2014).

It is clear that security of forest tenure rights should be complemented by enabling measures to build technical, financial, managerial capacities, access to technologies and markets. Non-timber forest products and small-scale timber enterprises can provide extensive, alternative economic activities, contributing substantially to the rural economy and employment. Economic growth, private investment and poverty alleviation should complement each other and this cannot be achieved through decentralized rights and responsibilities, and 'managing' the forest on their own. Rather, the ability and capacity of rural communities to invest and enter the market on a fair and competitive basis will lay the foundation for success.

Civil society organizations are key players as they can deliver and facilitate policy provision to local communities, and can help improve governance, transparency, environmental management and human rights. They influence the actions of governments, the private sector and other actors, which can provide for better decentralization, and enable rural communities to enter the market place and create wealth for sustainable forest management (Barrow et al. 2009). As such forest tenure reform is a practical priority – as it can help resolve conflicts, lay the foundations for stable and predictable investment by households, the government and private sector, and contribute to national and regional economic growth. Clarity in forest tenure reform will benefit all of society, not just forest communities.

The greater the security of local forest tenure, the stronger the interest and will of the community towards maintaining its condition. Secure forest ownership (or at least secure rights and responsibilities, with the community group designated as management authority) may be the most powerful stake a community can hold (Wily & Mbaya 2001). To improve community ownership of forests, closer attention must be paid to influencing policies that improve the way in which forests are sustained over the longer term. In particular, such processes should help communities to be identifiable, legally accepted and accountable institutions endowed with real powers of management. Finally, much good policy and law exists which, if fully implemented, would promote sustainable forest management.

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References

- Adams M, Palmer R. 2007. Independent review of land issues. Volume III 2006–2007. Eastern and Southern Africa. Oxfam, London.
- Agrawal A, Chhatre A, Hardin R. 2008. Changing governance of the world's forests. *Science*. 320 (5882).
- Akida A, Blomley R. 2007. Trends in forest ownership, forest resources tenure and institutional arrangements: Are they contributing to better forest management and poverty reduction? Case study from Tanzania. Rome: FAO.
- Alden-Wily L. 2011. Whose land is it? The status of customary land tenure in Cameroon. Centre for Environment and Development, FERN, and the Rainforest Foundation. London, UK.
- Alden-Wily L. 2014. Rights to resources in crisis: reviewing the state of customary land tenure in Africa. Washington (DC): Rights and Resources Initiative.
- Amanor KS. 2003. Natural and cultural assets and participatory forest management in West Africa. Conference paper series No. 8; 35 pp. Bamako.
- Azevedo T, Purnama B, Bosworth D, Collins S, Farrell J, Kanel K, Konkin D, Torres-Rojo J. 2014. Public forest agencies in the twenty first century. Washington (DC): Megaflorestais, Rights and Resources Initiative.
- Barrow E. 2014. Governance: linchpin for dryland natural resource management. South African Institute of International Affairs – Governance of Africa's Resources Programme. Policy Briefing 92. Capetown.
- Barrow E, Clarke J, Grundy I, Jones KR, Tessema Y. 2002. Analysis of stakeholder power and responsibilities in community involvement in forest management in eastern and southern Africa. Nairobi: IUCN – International Union for Conservation of Nature, Eastern Africa Regional Office; 154 p.
- Barrow E, Fisher N, Gordon J. 2012. Improving ecosystem functionality and livelihoods – experiences in forest landscape restoration and management. Gland: IUCN; 26 p.
- Barrow E, Jones K, Nhantumbo I, Oyono R, Moumini S. 2009. Customary practices and forest tenure reforms in Africa – status, issues and lessons. Washington (DC): Rights and Resources Initiative.
- Barzel Y. 1997. Economic analysis of property rights. Cambridge (UK): Cambridge University Press.
- Bekele H. 2001. Forestry outlook studies in Africa (FOSA). Rome: FAO.
- Biebuyck D. 1963. African agrarian systems. Oxford: Oxford University Press.
- Bigombé LP. 2007. Les régimes de tenure forestière et leurs incidences sur la gestion des forêts et la lutte contre la pauvreté au Cameroun [Forest Tenure Regimes and Their Impact on Forest Management and the Fight Against Poverty in Cameroon]. Final draft report for the FAO, GRAPS, Yaoundé.
- Boone C. 2003. Political topographies of the African state. Territorial authority and institutional choice. Cambridge (MA): Cambridge University Press.
- Bromley DW, Feeny D, McKean M, Peters P, Gilles J, Oakerson R, Ruge F, Thompson J. 1992. Making the commons work: theory, practice and policy. San Francisco (CA): Institute for Contemporary Studies Press.
- Brosius JP, Tsing AL, Zerner C. 2005. Communities and conservation: histories and politics of community-based natural resource management. Walnut Creek (CA): Altamira Press.
- Bruce JW. 1988. A perspective on indigenous land tenure systems and land concentration. In: Downs RE, Reina SP, editors. *Land and society in contemporary Africa*. London: University Press of New England; p. 23–54.
- Bruce JW. 1999. Legal bases for the management of forest resources as common property. FAO, FTTP, Community Forestry note 14; p 134. Rome.
- Buttoud G. 1991. Les Bois Africains à l'Épreuve Des Marchés Mondiaux [African Forests and examining the Global Market]. Nancy: ENGREF.
- Campbell, BM, Sithole B, Nemarundwe N. 2000. Empowering communities in Zimbabwe – new configuration of power. In: Campbell f the Congo BasinB, Sheona Shackleton, editors. Empowering communities to manage natural resources: case studies from Southern Africa. CIFOR, USAID, IUCN, WWF, ART, SADC, CSIR, IES, and EU. Harare.
- [CBFP] Congo Basin Forest Partnership. 2006. The forests of the Congo Basin. State of the forest 2006. Kinshasa: CBFP/CARPE.
- CILSS. 2003. Regional forum PRAIA +9; Rural land tenure and sustainable development in the Sahel and West Africa. Regional summary report 2003 Nov 17–21. Ougadougou. CILSS.

- Coquery-Vidrovitch C. 1982. Le régime foncier rural en Afrique Noire [Rural Land Tenure in Black Africa]. In: Lebris EE, Le Roy E, Leimdorfer F, editors. *Enjeux Fonciers en Afrique Noire [Stakeholders in Black Africa]*. Paris: Karthala; p. 62–81.
- Demsetz H. 1967. Towards a theory of property rights. *Am Econ Rev.* 57:347–359.
- Diaw MC. 2005. Embedded tenure institutions: African attempts to reform local forest policies. In: Kant S, Berry RA, editors. *Institutions, sustainability, and natural resources*. Springer; p. 43–81. The Netherlands.
- DINATEF. 2007. *Relatório Annual de 2006. [Annual Report 2006]*. Maputo.
- Djeukam R, Oyono P, Diarra B. 2013. Land and forest tenure reforms in Central and West Africa – preliminary assessment of progress made since Yaounde 2009. Washington (DC): Rights and Resources Initiative; 34 p.
- Dorlöchter-Sulser S, Kirsch-Jung KP, Sulser M. 1997. *Elaboration d'un Code local pour la gestion des ressources naturelles: le cas de la province du Bam au Burkina Faso. Document de travail; [Development of Local Codes for the Management of Natural Resources: The Case of Bam Province, Burkina Faso. Working document]*. 30 p.
- Duchochois P. 2000. *Rapport d'évaluation de la politique de la Banque et de sa mise en oeuvre dans le secteur forestier: Cas de la Côte d'Ivoire. [Assessment Report of the Bank's Policy and its Implementation in the Forestry Sector: the Case of Côte d'Ivoire]*. Washington (DC): World Bank.
- Ellsworth L, White A. 2004. *Deeper roots: strengthening community tenure security and community livelihoods*. New York (NY): Ford Foundation.
- Elson D. 2012. *Guide to investing in locally controlled forestry. Growing forest partnerships in association with FAO, IIED, IUCN, the Forests Dialogue and the World Bank*. London: IIED.
- Emerton L. 1996a. *Maasai livelihoods, forest use values and conservation in Oldonyo Orok, Kenya. African Wildlife Foundation Discussion Paper Series – Applied Conservation Economics Discussion Paper No. 2; 10 p.* Nairobi: African Wildlife Foundation.
- Emerton L. 1996b. *Participatory environmental valuation: subsistence forest use around the Aberdares, Kenya. African Wildlife Foundation Discussion Paper Series – Applied Conservation Economics Discussion Paper No. 1; 6 p.*
- Emerton L. 1996c. *Valuing the environment: case studies from Kenya. African Wildlife Foundation; 46 p.* Nairobi: African Wildlife Foundation.
- FAO. 2001. *Forestry outlook study for Africa. Eritrea report*. Rome: FAO.
- FAO. 2003. *Forestry outlook study for Africa. Sub regional report. East Africa*. Rome: FAO.
- FAO. 2004. *Forest statistics*. Rome: FAO.
- FAO. 2005. *Evaluations des ressources forestières mondiales 2005. Rapport du Burkina Faso (No 151); Rapport de Cote d'Ivoire, (No 158); Rapport du Togo (No 219); Rapport du Senegal (No 122); Rapport du Benin (No 144); Rapport du Niger (No 115); Rapport du Mali (No 127)*. [Evaluations for the Global Forest Resources Assessment 2005. Report for Burkina Faso (No. 151); Report for Cote d'Ivoire (No. 158); Report for Togo (No. 219); Report for Senegal (No.122); Report for Benin (No. 144); Report for Niger (No. 115); Report for Mali (No. 127)] Available from: www.fao.org/forestry/site/22060/en/ken/
- Faye P. 2015. *From recognition to derecognition in Senegal's Forests: hemming in democratic representation via technical claims. Responsive Forest Governance Initiative Working Paper, CODESRIA, Dakar 23p.*
- Fisher R, Barrow E, de Silva J, Ingles A, Shepherd G. 2012. *Improved access to forest resources: experience in informal tenure reform from IUCN's livelihoods and landscapes strategy*. Gland: IUCN.
- FNC. 2003. *National report to the forth session of the United Nations Forum on forests*. Khartoum: Ministry of Agriculture and Forests, Republic of Sudan.
- Foloma M. 2006. *Iniciativas de envolvimento Comunitario na Gestão dos recursos Naturais [Initiatives in Community Involvement in Natural Resource Management]*. Maputo: DNFFB/UMC.
- Forest Department Zambia. 2007. *Update on the status of the national forest programme partnership and request for a partnership agreement with the nation forest programme facility. Concept note*. Forest Department, Lusaka, Zambia.
- Forestry and Beekeeping Division, Tanzania. 2006. *Participatory forest management in Tanzania-facts and figures*. Dar-es-Salaam: Ministry of Natural Resources and Tourism; 8 p.

- FOSA. 2003. Etude prospective du secteur forestier en Afrique, rapport du Bénin [Prospective Study of the Forestry Sector in Africa, Benin Report]. Rome: FAO.
- Ghazi P, Barrow E, Mlengi W, Monela G. 2005. Regenerating woodlands – Tanzania’s HASHI project. In: World Resources Institute. World resources 2005: the wealth of the poor – managing ecosystems to fight poverty; p. 131–138. Washington, DC: World Resources Initiative.
- Grainger A. 2008. Difficulties in tracking the long-term global trend in tropical forest area. *Proc Nat Acad Sci.* 105:818–823.
- Hardin G. 1968. The tragedy of the commons. *Science.* 162:1243–1248.
- Iliffe J. 1995. Africa. The history of a continent. Cambridge (UK): Cambridge University Press.
- ITTL. 2003. Seeking ways out of the impasse on land reform in southern Africa: notes from an informal ‘think tank’ meeting. Pretoria: ITTL.
- IUCN. 2012. Livelihoods and landscapes strategy: results and reflections. Gland: IUCN.
- IUCN. 2013. The Environment and Gender Index (EGI) 2013 pilot. Washington (DC): IUCN; 253 p.
- Jagger P, Luckert M, Duchelle A, Lund J, Sunderlin W. 2015. Tenure and forest income: observations from a global study on forests and poverty. *World Dev.*
- Jones BT, Murphree MW. 2004. Community-based natural resources management as a conservation mechanism: lessons and directions. In: Child Brian, editor. Biodiversity, rural development and the bottom line: parks in transition. London: IUCN/SASUG, Earthscan.
- Kamugisha-Ruhombe J. 2007. The status of forests in eastern Africa. A contribution to the listening, learning and sharing lunch of RRI. Kampala: Rights and Resources Initiative and IUCN the World Conservation Union; 46 p.
- Karanja F, Kalage K, Moi K. 2002. Valuing forest resources in East Africa: Same/Taita Taveta cross boarder sites awareness workshop. Technical Report No.7. Moshi (Tanzania). GEF.
- Karsenty A. 1999. Vers la Fin de l’Etat Forestier? Appropriation des Espaces et le Partage de la Rente Forestière au Cameroun [Towards the End of the State Forest? Appropriation the Spaces and the Sharing of Forest Benefits in Cameroon]. *Polit Afr.* 75:7–12.
- Karsenty A. 2004. Enjeux des réformes récentes de la fiscalité forestière dans le Bassin du Congo. *Bois et Forêts des Tropiques.* 281:51–60.
- Katerere, Y. 2000. The contested boundaries between state and communal land in Zimbabwe: the case of Nyangui Forest. IUCN, the World Conservation Union – Forests for Life Workshop. Amman: IUCN; 6 p.
- Kigenyi FW. 2006. Trends in forest ownership, forest resources tenure and institutional arrangements. Are they contributing to better forest management and poverty reduction? Report for FAO; 46 p. Rome.
- Kone B. 2001. Biodiversity and forests: Mali case study. Paper prepared for an international workshop on Integration of Biodiversity in National Forestry Planning Programme at CIFOR Headquarters; Bogor, Indonesia, 2001 Aug 13–16.
- Kowero G, Kaoneka AS, Nhantumbo I, Gondo P, Jumbe CBL. 2003. Forest policies in Malawi, Mozambique, Tanzania and Zimbabwe. In: Kowero G., Campbell BM, Sumaila UR, editors. Policies and governance structures in woodlands of Southern Africa. Bogor: CIFOR.
- Lanne B. 1982. The Forest Plan [Le Régime Forestier]. In: Kouassigan GA, editor. Legal Encyclopaedia of Africa (Vol 5: Property law) [Encyclopédie Juridique de l’Afrique (Tome cinquième: Droit des Biens)]. Dakar: Les Nouvelles Editions Africaines; p. 377–390.
- Larson AM, Ribot J. 2005. Democratic decentralisation through a natural resource lens: an introduction. In: Ribot J., Larson AM, editors. Democratic decentralisation through a natural resource lens. London: Routledge, Taylor, and Francis Group; p. 1–25.
- Le Roy E. 1987. La réforme du droit de la terre dans certains pays d’Afrique Francophone. Etude Législative 44. [Law reform of Land in Some Countries in Francophone Africa. Legislative Study 44]. Rome: FAO.
- Legal Assistance Centre, Namibia. 2006. Our land they took: san land rights under threat in Namibia. Windhoek: LEAD-LAC.
- Leisz S. 1996. Zaïre country profile. In: Bruce JW, editor. Country profiles of land tenure: Africa, 1996. Madison: Land Tenure Center, University of Wisconsin; p. 131–136.

- Mander M, Mander J, Breen C. 1996. Promoting the cultivation of indigenous plants for markets – experience from KwaZulu Natal, South Africa. In: Leakey RRB, Temu AB, Melnyk M, Vantomme P, editors. Domestication and commercialization of non-timber forest products in agroforestry systems. Rome: FAO; p. 104–109.
- Manor J. 2005. User committees: a potentially damaging second wave of decentralisation? In: Ribot J, Larson AM, editors. Democratic decentralisation through a natural resource lens. London: Routledge, Taylor, and Francis Group.
- Mariki S, Salehe J, Shechambo F. 2001. The economic value of Tanzania's forests: report of a workshop held in Courtyard Hotel. Technical Report No.3. Dare-es-Salaam (Tanzania). Division of Forest and Bee-keeping.
- Mataya C, Gondo P, Kowero G. 2003. Evolution of land policies and legislation in Malawi and Zimbabwe: implications for forestry development. In: Kowero G, Campbell B, Sumaila U, editors. Policies and governance structures in woodlands of Southern Africa. Bogor: CIFOR.
- Matowanyika JZ, Marongwe N. 1998. Land and sustainable development in Southern Africa: an exploration of some emerging issues. Sustainable land management working/Discussion Paper Series. No 1. Harare: ZERO.
- Mawa K. 2014. Choix institutionnel et représentation démocratique au Burkina Faso: Reconnaissance dans le projet d'aménagement forestier de Sablogo [Choice in Institutional and Democratic Representation in Burkina Faso: Recognition in Forest Management in Sablogo]. Responsive Forest Governance Initiative Working Paper (in review). Dakar: CODESRIA; 27 p.
- Meinzen-Dick R, Di Gregorio M. 2004. Collective action and property rights for sustainable development – a collection of 16 Briefs. Washington (DC): IFPRI and CAPRI; 32 p.
- Mendelson J, el Obeid S. 2005. Forests and woodlands of Namibia. Hong Kong: Government of Finland and Government of Namibia. Sing Cheong Printing.
- McKay BJ, Acheson JM, editors. 1987. The question of the commons. Tucson: University of Arizona Press.
- Ministry of Natural Resources and Tourism. 2006. Participatory forest management in Tanzania. Facts and figures. Dar-es-Salaam: Extension and Policy Unit, Forestry and Bee Keeping Division.
- Ministry of Water, Lands and Environment. 2001. The Uganda forestry policy. Kampala: Government Printer.
- MINUA. 2006. Relatório do estado Geral do Ambiente. [Report of the State of the General Environment. Luanda. Ministry of Urbanisation and Environment]. Luanda: Ministerio do Urbanismo e Ambiente.
- Mogaka H, Gacheke S, Turpie J, Emerton L, F. Karanja. 2001. Economic aspects of community involvement in sustainable forest management in eastern and southern Africa. Forest and Social Perspectives in Conservation, No. 8.. Nairobi: IUCN Eastern Africa Regional Office.
- Mogoi J, Obonyo E, Ongugo P, Oeba V, Mwangi E. 2012. Communities, property rights and forest decentralization in Kenya – early lessons from participatory forest management. *Conserv. Soc.* 10:182–294.
- Monela, G, Chamshama S, Mwaipopo R, D Gamassa. 2004. A study on the social, economic and environmental impacts of forest landscape restoration in Shinyanga Region Tanzania. Ministry of Natural Resources and Tourism, Tanzania and IUCN. Dar-es-Salaam.
- Mudekwe J. 2005. State property regime versus common property regime. Harare: Forestry Commission.
- Mutamba JM. 1998. Du Congo Belge au Congo Indépendant 1940–1960 Emergence des «Evolués» et Genèse du Nationalisme [Belgian Congo to Congo Independent 1940-1960. The Emergence and Genesis of Nationalism]. Kinshasa: IFEP.
- Mveng E. 1984. Histoire du Cameroun [History of Cameroun]. Yaoundé: Editions du CEPER.
- Ndegwa S 2002. Decentralization in Africa – a stocktaking survey. Africa Region Working Paper No. 40. Washington (DC): World Bank.
- NEMA. 2001. State of the environment report for Uganda, 2000/2001. Kampala (Uganda): National Environment Management Authority.
- Nhantumbo I. 2007. Forest tenure in southern Africa. A contribution to the listening learning and sharing lunch of RRI. Nairobi: Rights and Resources Initiative and IUCN, World Conservation Union; p. 71.
- Nhantumbo I, Macqueen D. 2003. Direito das Comunidades: realidade ou retórica [Rights of Communities: Reality or Rhetoric]. Maputo: DNFFB/DFID/IIED.

- Njuki J, Kowero G, Nair C. 2004. What shapes forestry in Africa. Nairobi: AFORNET, CIAT and FAO.
- Nkonya E, Pender J, Jagger P, Serunkuma D, Kaizzi C, Ssali H. 2004. Strategies for sustainable land management and poverty reduction in Uganda. Research Report No. 133. Washington (DC): IFPRI.
- Nube T, Sande L, Moises N. 2006. Memórias do Seminário de Reflexão Sobre a Canalização dos 20% das Taxas de Exploração dos Recursos Florestais e Faunísticos [Reflection Seminar - Memories About Channeling of 20% of Exploration taxes of Forest and Wildlife Resources]. Maputo: DINATEF.
- Nyamu-Musembi C. 2006. Breathing life into dead theories about property rights: de Soto and land relations in rural Africa. Working Paper 272. Brighton. IDS.
- Nzioki A. 1995. The impact of globalization and land tenure reform on women and household food security. Oxford: OXFAM.
- Odera J. 2004. Lessons learnt on community forest management in Africa. Lessons learnt on sustainable forest management in Africa. KSLA/AFORNET/FAO. Nairobi.
- Ostrom E. 1990. Governing the commons. Cambridge (MA): Cambridge University Press.
- Ostrom E. 2007. A diagnostic approach for going beyond panaceas. *Proc Nat Acad Sci*. 104:15181–15187.
- Oyono PR. 2005. The foundations of the *conflit de langage* over land and forest in Southern Cameroon. *Afr Study Monogr*. 25:115–144.
- Oyono PR. 2007. Understanding forest tenure in Central Africa: transitions or hidden status quo in the dawn of the new century? A contribution to the listening, learning and sharing lunch of RRI. Yaounde: Rights and Resources Initiative and IUCN the World Conservation Union; 73 p.
- Oyono, PR, Cerutti PO, Morisson K. 2015. Forest taxation in post 1994 Cameroon: distributional mechanisms and emerging links with poverty alleviation, equity and forest sustainability. Washington (DC): World Resources Institute.
- Oyono PR, Nzuzi FL. 2006. Au sortir d'une "longue nuit institutionnelle", nouvelles transactions entre les politiques forestières et les communautés rurales en RD Congo post-conflit [Emerging from a "Long Institutional Night", New Transactions Between Forest Policy and Rural Communities in DR Congo Post-conflict]. *Afr. Dév* 31: 185–216. Special issue on Decentralization and livelihood in Africa (Ribot JC, Oyono PR, editors).
- Platteau JP. 1996. The evolutionary theory of land rights as applied to sub-Saharan Africa: a critical assessment. *Dev Change*. 27:29–86.
- Ribot JC. 1998. Theorizing access: forest profits along Senegal's charcoal commodity chain. *Dev Change*. 29:307–341.
- Ribot JC. 1999. Decentralization, participation, and accountability in Sahelian forestry legal instruments of political-administrative control. Berkeley workshop on Environmental Politics Working Papers WP 00-5. Berkeley: Institute of International Studies, University of California; 48 p
- Ribot JC. 2000. Rebellion, representation and enfranchisement in the forest villages of Makacoulibantang, eastern Senegal. In: Zerner C, editor. *People, plants and justice: the politics of nature conservation*. New York (NY): Columbia University Press.
- Ribot JC. 2005. Choosing representation: institutions and powers for decentralized natural resource management. In: Pierce Colfer CJ, Capistrano D, editors. *The politics of decentralization – forests, power and people*. London: Earthscan; 86–106.
- Ribot JC, Peluso NL. 2003. A theory of access. *Rural Sociol*. 68:153–181.
- Rights and Resources Initiative. 2014a. What future for reform? Progress and slowdown in forest tenure reform since 20012. Washington (DC): Rights and Resources Initiative; 80 p.
- Rights and Resources Initiative. 2014b. Lots of words – little action: will the private sector tip the scales for community land rights? Washington (DC): Rights and Resources Initiative; 36 p.
- Rose C. 1994. Property and persuasion: essays on the history, theory and rhetoric of ownership. Boulder (CO): Westview Press.
- Savadogo M. 2007. Regional situation analysis for West Africa French speaking countries. A contribution to the listening, learning and sharing lunch of RRI. Ouagadougou: Rights and Resources Initiative and IUCN, World Conservation Union; p. 92.
- Schlager E, Ostrom E. 1992. Property-rights regimes and natural resources: a conceptual analysis. *Land Econ*. 68:249–260.
- Schoneveld G. 2011. The anatomy of large-scale farmland acquisitions in sub-Saharan Africa. Working Paper 85. Bogor: CIFOR.

- Selebalo QC. 2003. Land reform and poverty alleviation: Lesotho's experience during the last two decades. Presented at the Regional Conference for Land Reform and Poverty Alleviation in Southern Africa. Southern Africa Regional Poverty Network; Pretoria.
- Seymour F, La Vina T, Hite K. 2014. Evidence linking community level tenure and forest condition: an annotated bibliography. Climate and Land Use Alliance. Available from: www.climateandlandusealliance.org
- Shackleton C, Shackleton S. 2004. The importance of non-timber forest products in rural livelihood security and as safety nets: a review of evidence from South Africa. *S Afr J Sci.* 100:658–664.
- Sitoe A, Tchauque F. 2006. Trends in forest ownership, forest resources and institutional arrangement in Mozambique: Are they contributing to better forest management and poverty alleviation? Rome: FAO.
- Sunderlin WD, Hatcher J, Liddle M. 2008. From exclusion to ownership? Challenges and opportunities in advancing forest tenure reform. Washington (DC): Rights and Resources Initiative.
- Tanner C. 2005. Land rights and enclosures: implementing the Mozambican Land Law in practice. Paper presented to the International Conference on, The Changing Politics of Land in Africa: domestic policies, crisis management, and regional norms. University of Pretoria/IFAS (Institut Français d'Afrique du Sud)/French Embassy of South Africa/London School of Economics, Pretoria. South Africa.
- Thompson EP. 1991. *Customs in common*. New York (NY): The New Press.
- Toulmin C, Delville PL, Traoré S. 2002. *The dynamics of resource tenure in West Africa*. Oxford: IIED and James Currey.
- Toulmin C, Quan J. 2000. *Evolving land rights, policy and tenure in Africa*. London: DFID/IIED/NRI.
- Trilles P. 1932. *Les Pygmées de la Forêt Equatoriale [The Pygmies of the Equatorial Forests]*. Munster: Anthropos Bibliotek.
- Vansina J. 1990. *Paths in the rainforest: toward a history of political tradition in Equatorial Africa*. London: James Currey.
- White A, Martin A. 2002. *Who owns the world's forests? Forest tenure and public forests in transition*. Washington (DC): Forest Trends & Center for International Law.
- Wilkie DS. 1988. Hunters and farmers of the African forest. In: Denslow J, Padoch C. editors. *People of the tropical rain forest*. Berkeley: University of California Press; pp. 111–126.
- Wily L. 2002. Participatory forest management in Africa. An overview of progress and issues. Available from: http://cbnrm.net/pdf/aldenwily_1_002_cfm.pdf
- Wily L, Mbaya S. 2001. *Land, people and forests in eastern and southern Africa at the beginning of the 21st century. The impact of relations on the role of communities in forest future*. Kenya: Nairobi. NRI&IUCN.
- Wirbelaeur C, Mosimane AW, Mabunda R, Makota C, Khumalo A, Nanchengwa M. 2005. A preliminary assessment of the natural resources management capacity of community based organizations in Southern Africa: case studies from Botswana, Mozambique, Namibia, Zambia and Zimbabwe. CBNRM Support Programme. Harare: WWF SARPO.
- World Bank, WWF. 2002. *Forest law assessment in selected African countries*. SGS Global Trade Solutions (GTS), Geneva. World Bank and WWF.
- Wunder, S, Angelsen A, Belcher B. 2015. *Forests, livelihoods, and conservation: broadening the empirical base*. World Development.
- Zeidler J, Jones J. 2006/2007. *Country case study: mainstreaming environment with a particular focus on drylands issues into development frameworks*. Windhoek: IECN/UNDP.