

Rural livelihoods and informal timber in Cameroon

Forest governance, small-scale loggers and Chinese traders in the bubinga (*Guibourtia* spp.) trade

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Agroforestry

Report

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Report

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Abbreviations

CIFOR	Center for International Forestry Research
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EIA	Environmental Investigation Agency
EUTR	European Union Timber Regulation
FAO	Food and Agriculture Organization of the United Nations
FLEGT	Forest Law Enforcement, Governance and Trade
MINFOF	Ministry of Forests and Fauna, Government of Cameroon
VPA	Voluntary Partnership Agreement

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Executive summary

In global efforts to address the illegal timber trade, legality-based forestry policies have gained momentum at both national and international levels in the past decade. Initiatives launched at the global level include, most notably, the United States Lacey Act and the European Union Forest Law Enforcement, Governance and Trade Action Plan, featuring Voluntary Partnership Agreements with timber producing countries exporting to Europe (FLEGT-VPA). In parallel to (and often in response to) these trade policies launched from markets with significant demand for timber and wood products, national governments in producing countries have implemented specific laws and regulations to restrict illegal logging and exports from their shores.

Lost in the enthusiasm to halt illegal logging is concerns for rural livelihoods of villagers, small-scale producers and processors who depend on informal timber harvest. Although the design of FLEGT-VPAs attempted to foresee and prevent the potential deleterious effects of regulations on economically vulnerable timber producers and communities who access timber through informal channels (i.e. a mix rules of access unsanctioned by the state; some based on customary tenure system and others on extra-legal conduct).¹ However, it remains uncertain the degree to which safeguards are put in place to protect local livelihoods effectively while reducing environmental degradation. For this reason, the efficacy of the emerging global and national timber trade regime in serving social and environmental goals requires monitoring and research. This is especially true in sub-Saharan Africa where millions of small-scale loggers who harvest timber informally have long depended on access to the market for their livelihoods. When rights to access and trade timber are modified, there is a risk of exclusion of more vulnerable groups such as these, as well as substantial opportunities for “elite capture” of lucrative resources and markets.

As a case study on the social and environmental implications of legality-based policies, this paper traces the recent history of the trade in bubinga (*Guibourtia* spp.), a highly valuable leguminous hardwood species endemic to western Central Africa. After an explosion of demand for bubinga timbers in China sparked an increase in logging and exports, the species was targeted by a partial export ban in 2011. Using an analytical approach combining value chain analysis and legal pluralism, this paper provides a critical analysis of an example in which governance of the timber trade has likely exacerbated inequitable resource access, with unclear outcomes in terms of conservation of the resource base.

Based on interviews with more than 60 stakeholders, including 33 rural participants in the informal trade with Chinese buyers, the paper presents four key findings:

1. Prior to the partial ban, informal bubinga value chains consisted of Cameroonian rural operators and urban traders embedded in Cameroon’s informal sector, with relatively favourable terms to the resource providers.
2. Rural populations involved in the bubinga trade were motivated by livelihood concerns and tenure insecurity. The informal trade was an opportunity to reclaim customary rights and circumvent the

¹ Strictly speaking, the informal channel unsanctioned by the state may be termed illegal, yet as this paper will explain in subsequent chapters based on legal pluralism, such informal rules of access and trade are based on a parallel system of rules legitimated by forest-dependent communities and at times viewed more legitimate than the state system. This paper therefore uses the term “informal” instead of “illegal” to allow for a more nuanced and objective discussion on rural livelihoods impacted by changing regulations.

formal extractive governance regime which had become dominated by members of the political elite. It was an opportunity for local people to benefit from the global timber trade.

3. Although not sustainable in the long-term, the trade provided forest-dependent communities with critical (albeit short-term) income, an economic safety net and employment opportunities that buffered livelihoods against variable economic conditions and seasonal fluctuations in farm income.
4. The outcomes of intervention by the government in the form of a partial export ban on bubinga were suboptimal from a social point of view and ambiguous from an environmental perspective. The partial export ban significantly changed the configurations of the bubinga value chain, effectively excluding rural, poor and less-politically connected actors from the lucrative trade while allowing politically and economically powerful actors to continue both legally and illegally. The environmental outcome remains questionable: available evidence, though scant, indicates that even technically legal bubinga logging continues at an unsustainable level.

Ultimately, this case study demonstrates the need for a more critical reflection of the effects – intended or unintended - of legality-based instruments on the livelihoods of forest-dependent communities, particularly in countries such as Cameroon where the government depends on revenue from extractive resources and rural populations depend on the informal sector for social welfare.

1 Introduction

The dual mission of resource management in developing countries – to conserve the environment and alleviate poverty – has troubled scholars and policymakers for decades (Sayer and Campbell 2004). It is a particularly important question in forest governance as around 350 million people globally depend on forests for their livelihood (PROFOR 2008). However, forest-dependent communities are often socially marginalized and lack the political leverage of urban counterparts in developing countries (Sunderlin et al. 2005). In many ways, however, they are the ultimate decision makers in regards to trade-offs between conservation and other land-use activities (Buchy and Hoverman 2000; Mascarenhas and Scarce 2004; Pagdee et al. 2006). For this reason, their inclusion in and ownership of policymaking processes and implementation is critical to the success of any national and international forest policies aimed at conservation of forests (Brechin et al. 2002; Persha et al. 2011).

The recent wave of policies addressing illegal logging and timber trade around the world – including implementation of the EU’s FLEGT Action Plan and development of VPAs, and the US Lacey Act, among others – have largely struggled to integrate the needs of forest-dependent rural communities. For example, in the face of the complex political, social and economic realities of forest governance in tropical countries, legality-based policies have been criticised to overlook the “anti-poor” nature of national forest legal frameworks (Brown et al. 2006), the importance of the informal timber sector to economically vulnerable rural populations (Wit et al. 2010) and the pervasiveness of illegal practices among companies with ‘legal’ permits (Brack 2003; Putzel 2009; Ekman et al. 2013; Weng et al. 2014; Finer et al. 2014). As a result, the line between legality and illegality – and associated livelihood and environmental impacts – becomes nebulous, challenging the assumption of those who argue that legality would bring forth environmentally and socially desirable outcomes (e.g. EIA 2012; UNEP 2012). Using a case study approach, this paper interrogates such relationships among the informal timber sector, rural livelihoods and illegal timber export.

The Cameroon case study presented in this paper highlights the problematic relationship between extractive institutions and the informal forestry sector. Acemoglu and Robinson (2012) argued that post-colonial political and economic institutions controlled by elites tend to “extract income and wealth from one subset of society to benefit a different subset (p76).” In the forestry sector, a large body of literature details the colonial legacy of forest legislation and the usurpation of traditional lands and resources formerly held by forest-dependent communities in tropical countries (e.g. Egbe 1997; Becker 2001; Adams and Mulligan 2003; German et al. 2009; Kelly and Peluso 2015). After independence, local elites had little incentive to reform as they continued to derive benefits (Acemoglu 2003); in the case of Cameroon, the post-independence government even regressed to a version of an old colonial land rights system that was less favorable to customary users than the one left by the departing French administration, who had legally recognized customary land tenure in the late 1950s (Kelly and Peluso 2015).

Today, forest institutions in many parts of the world produce ‘double standards’ and ‘structural asymmetries,’ allowing the politically and economically powerful to “permanently exclude the rural poor” from benefiting from the natural wealth around them (Larson and Ribot 2007). The problem is especially acute in Africa where 98.1% of forests are under state ownership (Larson et al. 2010). Many African countries’ forest regimes, including that of Cameroon, suffers from a lack of legitimacy in the eyes of rural populations (Oyono 2004). To tackle the issue, donor institutions have promoted decentralization of forest governance and management since the mid-1980s (Barry et al. 2010; Colfer and Pfund 2011). However, studies examining the outcomes of such reforms illustrate the ways in which elites with vested interests in the forestry sector often retain control over forest resources across many tropical countries (see e.g. Ribot et al. 2006). In this way, forest-dependent populations are

prevented from participating in the state-sanctioned timber trade, in effect resulting in “timber theft” from rural residents committed by the state (Honey-Rosés 2009).

As a result of inequitable extractive institutions, the informal timber sector is where marginalized rural actors turn to participate in the timber trade. Drawing on existing research (e.g. Kaimowitz 2007; Cerutti and Lescuyer 2011), this paper broadly defines the informal timber sector as unlicensed logging and trade conducted by small-scale workers. In Cameroon, such informal loggers often process timbers in the forest through low-cost, low-technology chainsaw milling. Although technically illegal, the informal sector serves as the de-facto supplier of domestic timber markets in the Congo Basin (Figure 1: 57% of Cameroon’s timber produced by the informal sector).

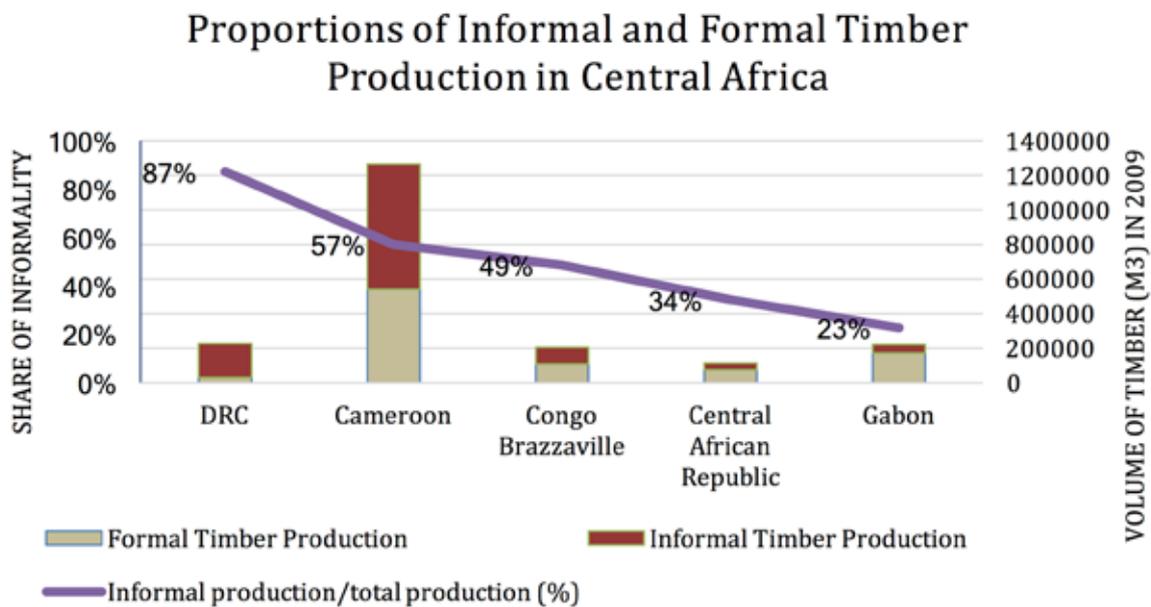


Figure 1. Informal Timber Production Share in Central Africa (Source: Lescuyer and Cerutti, 2014).

Prior research shows that the informal sector may benefit rural livelihoods in at least three ways: i) evading elite-controlled extractive institutions and associated costly regulations, ii) bringing tangible economic benefits and iii) reclaiming customary rights over resources (Weng 2015). First, the informal sector is where small-scale operators can avoid regulations that create barriers to entry (e.g. high

registration costs, burdensome bureaucratic systems and corruption²) that do not accommodate their needs (ibid.; Cerutti et al. 2013). Second, despite unequal distribution of profits across the value chain, small-scale informal logging provides higher income to rural residents than the formal sector (Wit et al. 2010). In Cameroon, the informal timber harvest provides up to four times the revenue than area-based forestry tax revenue to the local economy and employs three times as many people as the industrial sector (ibid.). While not a long-term solution to poverty alleviation, informal logging and trade provide small-scale loggers and rural communities with much-needed cash income in the short to medium term (Cerutti and Lescuyer 2011). Finally, customary rights and norms often legitimate participation by rural communities in informal business. Despite numerous legislative reforms and formalizations of land and resource rights, resource governance throughout rural Africa continues to feature both customary and formal systems codified in national law – indeed they have co-existed and co-evolved in the past decades (Manji 2006; Wynberg 2015). As this paper will illustrate, the informal sector is a space where customary rights and norms are central to the ways in which rural communities govern their resource use.

It is this background – the interface between the global fight against illegal logging, promotion of legality-based instruments, elite-captured extractive institutions, the informal sector and rural livelihoods – against which this paper examines the case of illegal logging and the trade in bubinga, a highly coveted species in the Chinese market, in Cameroon. This study addresses i) how the informal domestic timber sector interacts with global timber trade and ii) the impacts on rural livelihoods when connections between informal producers and the global market are broken. Insights drawn from these points permit a discussion of the implications for equitable forest policymaking.

Specific research questions addressed are:

1) How is the informal value chain of bubinga exports from Cameroon to China organized?

- Who are the participants?
- What are their motivations for participation?
- What is the internal governance of the value chains?
- What are the perceived livelihood benefits of the trade?

2) How did the partial export ban in 2011 affect the informal bubinga value chain?

- What were the impacts of the partial export ban?
- What were the social and environmental implications?

² Cameroon has been noted for “endemic” corruption and elite capture of institutions (Fombad 2000). In 2012, Transparency International ranked Cameroon the 144th corrupt country in the world (Transparency International 2013).

2 Analytical Framework

In order to address the research questions mentioned above, this study employs a descriptive value chain analysis with a legal pluralist approach as an analytical framework. As explained below, by combining the two approaches – and particularly highlighting the informal sector through legal pluralism - the study attempts to examine i) the power dynamics among direct participants of the informal bubinga trade and ii) the impacts of Cameroon’s forest legislation on informal actors.

2.1 Value chain analysis; intra- and extra-chain governance

The value chain analysis is used to create a picture of who informal participants in the bubinga trade are, what they do in the trade and how they are engaged. Value chain analysis has been used to examine the effects on producers in developing countries arising from globalisation of production and exchange and increasing integration of developing countries’ economies into the global capitalist system (Kaplinsky 2000). Specifically, it has been used to i) quantify the economic rent accrued at each stage of production and ii) describe the power relations between producers and buyers along the chain (Kaplinsky 2000; Humphrey and Schmitz 2001; Gereffi et al. 2005; Gibbon et al. 2008).

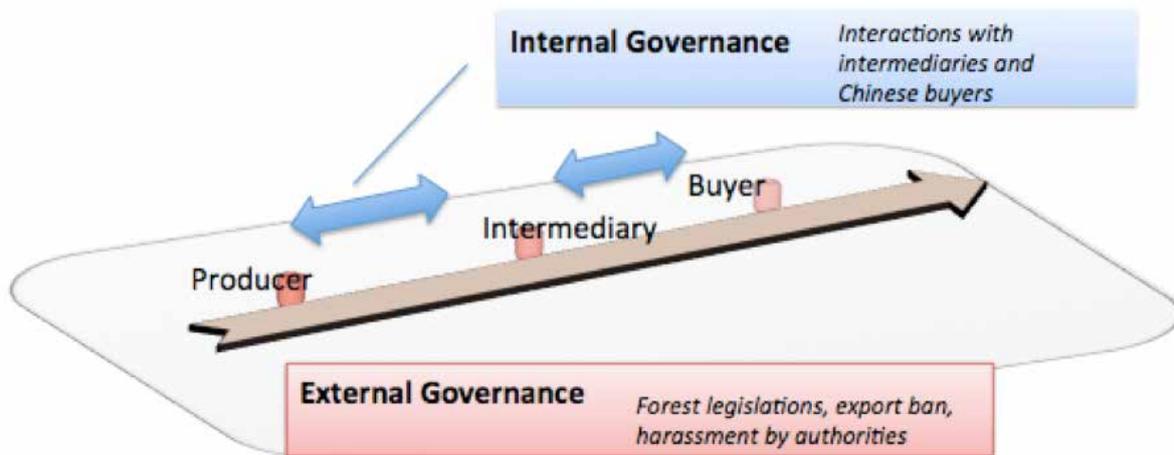


Figure 2. Internal and external governance in the bubinga value chain.

The latter component, governance of production processes and markets across political boundaries, has in particular received much attention (Gibbon et al. 2008) and is critical to this study. Gereffi and Applebaum (1994) defined value chain governance as the “authority and power relationships that determine how financial, material, and human resources are allocated and flow within a chain.” In other words, governance structures and decisions significantly shape how and on what terms producers from developing countries participate in the global division of labour. Specifically, this study addresses how national governance (in Cameroon) affects producers across the informal and formal sectors connecting to the international market (for bubinga), along with the social implications of changing the terms of access to the resource.

To make such analysis possible, this study goes beyond the traditional spheres of examination in value chain governance, which are: the impact of buyers on producers and vice versa (Gereffi 1994, Humphrey and Schmitz 2001) and the coordination between the two (Gereffi et al. 2005). To capture the changing terms of resource access (both based on state-sanctioned formal rules and unsanctioned informal rules), we add institutional factors by borrowing Kaplinsky (2000)'s model. He extends Gereffi's original concept of value chain governance by distinguishing two forms thereof: governance exercised by parties internal and external to the chain (Ibid). In this study, therefore, the internal domain captures the interactions among direct participants such as upstream communities, small-scale operators, intermediaries and Chinese buyers. The external domain illustrates how government officials and industrial concessionaires operating in the formal timber sector interacted with the informal bubinga chain – and importantly how formal rules (regulations) impacted the selected chain (Figure 2).

2.2 Value Chain Analysis in the context of Legal Pluralism

The aforementioned value chain literature, however, misses a layer of complexity central to governance of small-scale logging linked to global market: informal rules and institutions. Villagers, rural loggers and local traders participating in unlicensed small-scale logging and timber trade may create informal governance rules, which at once run parallel to and interact with the formal domain. Legal pluralism, therefore, is a useful lens through which to capture such parallel existence and the interactions between informal and formal governance of a timber value chain. Furthermore, this body of literature is relevant to multi-level forest governance, especially in countries where national forest laws have been shaped by preceding colonial rules and do not adequately accommodate the needs of rural and marginalized communities as mentioned above (Wit and van Dam 2010). Questioning the adequacy of one legal framework, scholars of legal pluralism argue that the world consists of hybrid legal spaces, where people are regulated by “an interlocking web of jurisdictional assertions by state, international and non-state normative communities” (Berman 2007). If multiplicity and hybridity represent the reality, with conflicts inevitably arising, then we may deliberately “seek to create or preserve spaces for conflict among multiple, overlapping legal systems” (Ibid p.1164).

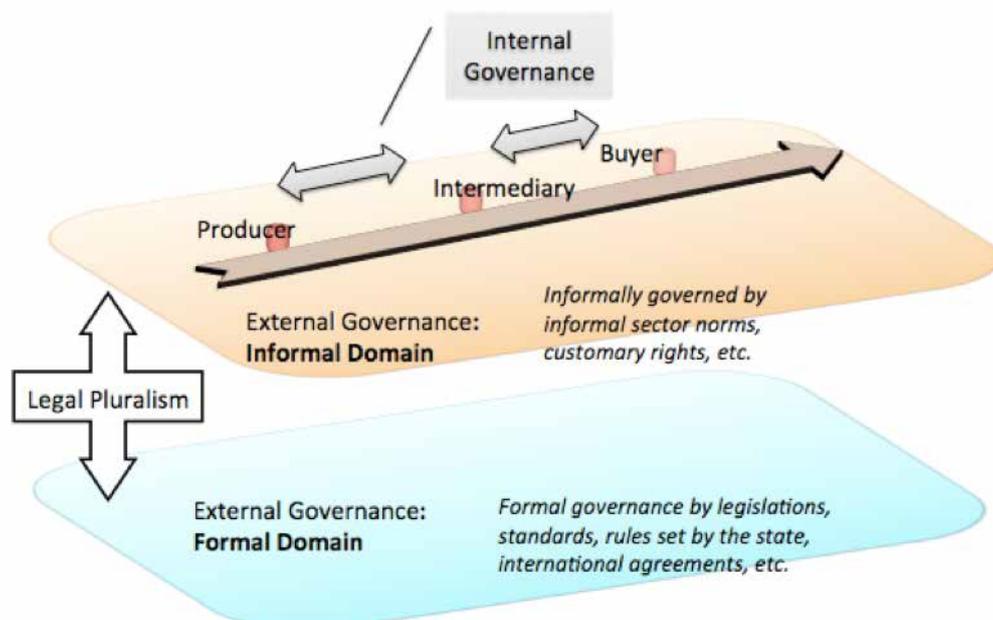


Figure 3. External governance of a value chain through a lens of legal pluralism.

Although in some ways an oversimplified binary perspective, this paper argues that a distinction between the formal and informal domains constituting forest regimes is a useful construct in discussing rural livelihood issues in many tropical countries. Because small-scale operators from rural areas tend to operate in the informal domain based on customary and other rules unsanctioned by the state, government regulations conceived from the perspective of the formal domain to control them may “reinforce social injustice and further limit rural livelihoods” (Colchester et al. 2006). Since this study is interested in including local communities fully in the analysis of value chains supplying what is often termed ‘illegal timber’ to the international market, we avoid clear-cut legal interpretations that would in some sense criminalize them for engaging in unlicensed small-scale logging to sustain livelihoods. In the ensuing chapters, the pluralist lens first help with conceptualizing both the informal and formal domains in Cameroon’s forest regime, and then with assessing the impacts of shifting balance across those domains on villagers, rural loggers and small-scale traders operating in the informal sector but linked to an increasingly formalized global timber trade regime. Put it simply, the analytical framework in this study conceptualises the ‘frame’ of Cameroon’s forest regime in ways that incorporate the marginalised actors, and then examines internal and external governance issues related to the chosen value chain (Figure 3).

3 Case Background

Cameroon was chosen as an ideal location for this research for several reasons. First, access to participants in the informal timber sector was facilitated by CIFOR's prior research on informal domestic logging and FLEGT-VPA and Chinese trade and investment in Africa.³ Second, as the third largest African exporter of timber products to China, Cameroon was known to have an active resident community of Chinese timber traders (Putzel et al. 2011). Third, Cameroon's forest governance regime features characteristics of extractive institutions, notably corruption in forest governance directing large benefit flows to an elite political class and little to forest-dependent rural communities (Cerutti et al. 2013). Finally, Cameroon had ratified and was in the process of implementing a FLEGT-VPA with the EU, hence was an ideal site to examine the dynamics between informal sector logging, legality-based instruments and the global efforts to stomp illegal timber trade.

Bubinga was chosen as the subject of this study after consulting relevant literature and experts familiar with Chinese timber businesses in Cameroon. This choice was supported by several facts discovered during background research: first, bubinga is a timber species in high demand in the Chinese market⁴; second, the Cameroonian government had recently instituted a partial export ban to control the bubinga trade (MINFOF 2011); and third, bubinga is valued for antique-style furniture production in China, a market indicated as a driver of illegal logging across the tropics (Global Witness 2009).

Box 1. Timeline of key legislative and policy events affecting the Cameroonian timber sector and the bubinga trade

<u>Year</u>	<u>Key Event</u>
1994	The new forest law
1998	Chinese capital enters Cameroonian timber sector
1999	Suspension of small-scale permits for timber harvest
2006	Suspension lifted, the government call for public auction of 50 small permits
2010	FLEGT-VPA Signature
2011	VPA Ratification
2011	Bubinga export ban (April)
2012	Bubinga export ban renewed (November)

(Source: Republic of Cameroon 1994; Cerutti 2011)

3.1 Overview of Cameroon's Forestry Sector

Cameroon is situated in the Congo Basin, the second largest tropical forest after the Amazon region (Megevand et al. 2013). Timber resources are of great importance to the national economy, accounting for over 10% of GDP and forest products accounted for nearly 20% of all exports between 1990 and 2000 (Alemagi and Kozak 2010).

Cameroon was the first country in the Congo Basin to push forward a decentralization reform, which was driven by a World Bank structural adjustment program (Sizer and Plouvier 2000). This led to

³ For information on these CIFOR research projects and their publications, see www.cifor.org/pro-formal and www.cifor.org/china-africa (accessed 7 April 2015).

⁴ The high degree of Chinese demand for bubinga was supported by key informant interviews with four knowledgeable researchers in Cameroon.

the institution of a reformed forest law in 1994,⁵ which resulted in three key changes that affected Cameroon's forest-dependent communities.

First, the 1994 reform divided the forest estate into permanent and non-permanent forests and installed an auction system for allocating industrial concessions in permanent forest. However, the zoning of permanent forest lands proceeded without the consent of local communities, leading some scholars to criticize the process as an appropriation of land by the state (Cerutti and Tacconi 2006). Van den Berg and Biesbrouck (2000) described this action as “the legal usurpation of customary property rights on forest resources,” importantly noting that the law did not reduce the importance of customary rules of tenure and access in rural communities.

Second, the reform introduced a benefit-sharing forest tax system mandating a redistribution of 10% of logging revenues to rural communities living in the vicinity of commercial concessions (Morrison et al. 2009). Research has however found that this tax revenue often does not reach local communities due to entrenched corruption within governing institutions (Cerutti and Tacconi 2006; Morrison et al. 2009).

Finally, partly in response to decentralization efforts promoted by the World Bank, the reform established a new category of “community forests” (Brunner and Ekoko 2000). However, adoption nationwide has been slow (Alemagi and Kozak 2010) and fraught with difficulties. Where established, structural deficiencies of the 1994 forest law have led to management conflicts and capture of community forest resources by local elites (De Blas et al.2009; Van den Berg and Biesbrouck 2000; De Blas et al. 2011). Community forests therefore have so far failed to serve the interests of marginalized communities, who still face difficulties in establishing ownership rights over the forest resources surrounding them (De Blas et al. 2009).

3.2 Cameroon's informal timber sector and rural livelihoods

An important outcome of the 1994 reform is that it paved the way for today's massive informal sector, which largely supplies the domestic market. Initially, the 1994 reform created three options for small-scale operators in non-permanent forests: 1) logging permits valid for up to 1 year for a maximum volume of 500m³; 2) personal logging permits for up to 3 months and a maximum volume of 30m³; and 3) user rights for residents near forest zones (Republic of Cameroon 1994). In 1999, however, the government suspended all small-scale permits, citing illegal logging and abuse (Cerutti et al. 2011b). Overnight, this suspension made illegal harvesting the only option for thousands of small-scale operators (Cerutti and Tacconi 2006). When the suspension was lifted after seven years, small-scale operators did not resume applying for permits: on one hand, a functional set of informal rules had evolved to govern informal markets and to systematize payment of “informal taxes” to authorities⁶; on the other hand, operators faced high bureaucratic costs when applying for permits, and hence preferred to continue operating in the informal sector.

Kishor and Lescuyer (2012) estimate that the volume of timber flows in the informal sector, which supplies most of Cameroon's domestic timber demand, is currently higher than in the formal export sector. In addition, the informal sector is estimated to employ four times as many people as the formal industrial sector (Wit et al. 2010). Beyond employment of workers, researchers have found that informal timber activities also contribute to poverty alleviation in rural Cameroon: chainsaw

5 Law No. 94/01 to lay down Forestry, Wildlife and Fisheries (Republic of Cameroon 1994).

6 See, e.g. Lescuyer et al. 2010 for an explanation of informal taxation, which can also be interpreted as a systematized form of bribery.

millers directly negotiate with villagers for access to timber, an important source of cash income in rural areas (Cerutti et al. 2011b; Dehu 2012). In terms of Cameroon's rural livelihoods, the informal sector's contribution cannot be overstated: it is "deeply woven into Cameroon's rural economic fabric (Cerutti et al. 2011b)."

3.3 Formal and informal forest governance in Cameroon

The tortuous history of Cameroon's forestry legal framework, particularly its interaction with customary and informal systems of access and trade since the colonial period, has helped alternative systems of governance relevant to formal and informal activities to flourish. In relation to rural livelihoods and resource access rights – this study's central themes, literature reveals how rural populations and small-scale operators stand in disadvantage in both domains while political and economic elites continue to capture resources and marginalise these actors further. Although we present them as separate "domains" below for analytical purposes, actors may participate in both to some degree.

First, the informal domain is where the vibrant small-scale bubinga logging and trade occurs. Key participants in this domain include villagers who sell trees on customary land without approvals from authorities and chainsaw millers (i.e. small-scale loggers, sawyers, and carriers) who operate in the forests without licenses from the government. Outside rural areas, intermediaries, consumers and corrupt officials also play a role. Sets of informal rules govern the conducts in this domain; they are devised based on customary tenure arrangements (e.g. loggers seeking a fellow villager's permission to access a tree on his/her land) and through negotiation between actors (e.g. officials extracting payment in return for allowing informal operations). The scale of informal taxation should not be underestimated: per one estimate, Cameroonian government officials collect more than 6 billion francs annually in such fees (Cerutti et al. 2011b). Despite the sector's vibrancy and dominance in Cameroon's forestry sector mentioned in previous section, it is important to note that villagers and small-scale operators continue to suffer from insecure customary tenure over forest resources and harassment from authorities.

In the formal domain, the primary actors include law enforcement officials from the Ministry of Forests and Fauna (the Ministry or MINFOF hereafter), customs and other relevant authorities responsible for taxation and law oversight as well as established timber businesses with industrial concessions (both foreign and domestic owners). The conducts in this domain are regulated by a set of formal rules in the form of national forestry legislation and regulations, bilateral agreements such as FLEGT-VPA as well as other regulations related to various aspects of business operation such as registration, taxation and import and export. Based on the literature, one key characteristic of these actors and rules in the formal domain is their role in capturing Cameroon's forest resources to serve the interests of the political and economic elite. The country's extractive institutions in natural resource management have been widely discussed in literature (Forje 2008; Lee and Schultz 2011; Gauthier and Zeufack 2011). Particularly relevant to this study is the variety of abusive practices in the forestry sector by corrupt (albeit formal) actors (Morrison et al. 2009; Cerutti et al. 2013). Indeed, as Cerutti (2006) observes, the 1999 suspension of small permits only fostered corruption, and created a "widespread network of rent-seeking activities" within the elite-captured formal institutions.

In summary, the picture that emerges from the literature is that of two governance domains co-existing – and interacting with each other as we will see later - in Cameroon's forestry sector. an informal one in which authorities extract rent from economically marginalized actors in return for the privilege of accessing and trading timber outside the boundaries of the law; and a formal one dominated by extractive elites with access to the political and economic resources that enable them to comply with (or at least demonstrate compliance with) the law.

3.4 Chinese businesses in Cameroon's timber sector

For most of the second half of the 20th century, European players dominated Cameroon's logging sector (Eba'a Atyi 1998). In 1998, the first ethnic Chinese-owned company entered the market, when a Hong-Kong based company acquired a French logging company. To date that company owns the largest area of concessions in Cameroon, and operates from within the formal domain (Ceruttiet al. 2011a).

Globally, the role of Chinese business in illegal logging has received much attention especially from environmental NGOs (Laurance 2012; Environmental Investigation Agency 2012). For example, Laurence (2012) calls China "a black hole for the world's timber, much of it harvested illegally." Global Witness (2009) notes that China imports around a quarter of all illegal timber traded internationally (p8). However, their evidence are generally anecdotal and lack systematic examination of livelihood and environmental impacts; as a result, the involvement of Chinese businesses in informal timber sectors in tropical countries remains poorly understood in especially two regards. First, although mentioned in several studies, (e.g. see Putzel et al. 2011 for Cameroon and elsewhere in Africa for Putzel and Kabuyaya 2011; Ekman et al. 2013; Asanzi et al. 2014; Godwin 2014), no in-depth research has recorded and analysed the perceptions of local actors in the informal sector on their experiences of interacting with Chinese traders under changing rules of access in the informal and formal domains.

Second, as to the links between the informal Chinese trade and rural livelihoods, perspectives vary: on one hand a report published by EIA (2012) finds that illegal Chinese trade has "a dire impact" on local communities, e.g. in the Solomon Islands and other Asia-Pacific countries, due to rapid and widespread deforestation.⁷ Mackenzie (2006) highlights that the root cause behind illegal logging linked to Chinese players is lack of recognized customary ownership by upstream communities in the forests of Zambezia, Mozambique. In Peru, Putzel et al. (2008) highlight how Chinese-linked illegal trade allowed some benefits of the global timber trade to "flow to economically marginalized groups." Importantly, Putzel (ibid.) calls for further research in the relationship between global illegal timber trade (especially those linked to the Chinese market) and rural livelihoods.

This paper aims to offer insights in both regards (local actors' own perception and rural livelihoods impacts), but does not pretend to assess and certainly would not wish to downplay the effects of logging-related environmental change (either in formal concessions or informally logged forests) on human livelihoods. There is, however, an underlying normative bias that should be recognized in this paper and elsewhere (e.g. Putzel 2008): if a country allows its forests to be logged (by anyone, whether local or foreign), local people who are dependent on those forests should be among those (if not first among those) who benefit from commercial timber trade.

3.5 The bubinga trade and the Chinese market

Belonging to a genus of several closely related species endemic to the Congo Basin, bubinga (*Guibourtia* spp.) is a tropical leguminous hardwood sometimes marketed as a rosewood (or hongmu)

⁷ There is, of course, no doubt that overexploitation of forests in areas where communities depend on them for subsistence has dire consequences for livelihoods. The comparative role of the market (and its actors) vs. the role of national authorities, and the responsibilities assigned thereto in assuring protection of the natural environment as well as the wellbeing of the citizenry, will remain a source of debate. However, neither environmental nor social advocates need necessarily tread the intermediate zones and explore the theoretical complexities of such distinctions.

due to its reddish colour (Box 2). In Cameroon, bubinga has been traditionally used for furniture making due to its durability and workability; it was not, however, a particularly expensive or popular species before the Chinese entered the market. In the Chinese market, bubinga is a highly coveted species due to its resemblance to rosewood, as it can be used to produce high-end antique redwood furniture for the domestic luxury market.

According to interviews conducted for this study (see methodology below) exports of bubinga by Chinese exporters buying from informal loggers started around 2010. In April 2011, the Cameroonian government imposed a partial export ban (MINFOF 2011), which prohibited exports of bubinga sourced outside of industrial concessions. In November 2012, the government renewed the partial ban until the listing process for CITES is completed (MINFOF 2012). However, according to a forest ministry official, bubinga exploitation and exports from industrial concessions were still allowed through special authorizations from the Ministry.

Box 2. Bubinga Species Information

- **Scientific name:** *Guibourtia* spp.
- **Family:** Fabaceae
- **Other common names:** Kevazingo (Gabon), Essingang (Cameroon), Ovang
- **Chinese name:** 巴花
- **Distribution:** Southeast Nigeria to Cameroon, Gabon and the Congo region. Occurs in swampy or periodically inundated forests, also near river or lakeshores
- **Height:** may reach up to 45m
- **Characteristics:** Heartwood pink, vivid red, or red brown with purple streaks or veins. Hard and durable, but fairly easy to saw and plane.
- **Use in China:** Given its resemblance to rosewood, used for antique furniture in the Chinese market.

Source: USDA 2013.

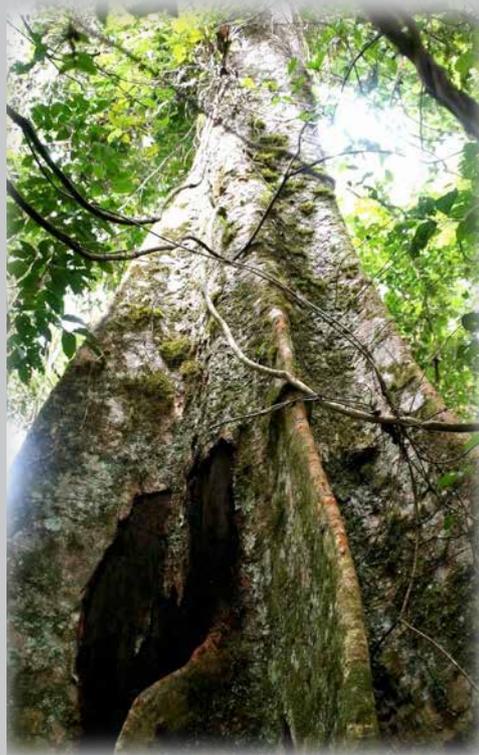


Photo: Xiaoxue Weng

4 Methodology

Using a value chain analysis approach, this study traced the in-country supply chain of bubinga from the southern forests of Cameroon, via the markets and sawmills in Yaoundé to the Douala port from where it is exported to China. Semi-structured interviews and focus group discussions were conducted with 67 informants in three locations: communities in rural Southern Cameroon, Yaoundé and Douala. Among the informants, 33 self-identified as direct participants in the informal bubinga trade, either as upstream chainsaw millers (Cameroonian), intermediaries (Cameroonian) or traders (Chinese). Among the informants, 20 were key informants who were chosen based on literature review, snowball sampling and recommendations from researchers and experts familiar with the bubinga trade in Cameroon (Table 1). Due to the sensitive nature of the topic, all informants are cited anonymously and only minimum information regarding their identity is provided. A numbered list of the informants and their basic information is provided in Appendix 1, and the data they contributed to the study is cited within the text in brackets according to their respective reference numbers {n}.

Table 1. Summary of Interviewee Attributes.

	Methods	Site	Total No.	Informants directly involved in the bubinga trade	Profession
Upstream	Semi-structured interviews; Focus groups	6 villages in the southern forests of Cameroon	21	21	Log yard owner, sawyer, carrier, intermediary, villagers who sold trees
Midstream	Semi-structured interviews; Focus Groups	1 sawmill in Yaoundé; 2 timber markets respectively in Yaoundé and Douala	17	10	Sawmill manager, wood trader
Downstream	Semi-structured interviews	Offices in Douala	3	2	Chinese timber traders
Key informants	Semi-structured interviews	Yaoundé and Douala	21	N/A*	Government officials, NGOs, researchers, export agency, formal concession owner
Total			67	33	

*It is possible that some government officials interviewed were involved in bubinga trade (inferred from other interviews and informant conversations), though they did not self-identify.

4.1 Site Selection and Sampling Strategy

Upstream, six communities in southern Cameroon were selected for the following reasons: 1) the area features one of the largest stocks of bubinga trees in Cameroon (Betti 2012; pers. comms) and 2) an experienced local facilitator was available in the area who had contributed to earlier CIFOR work on the informal sector. Efforts were made to include a wide range of participants in the value chain (Table 2). To gain access to these interviewees, Xiaoxue Weng consulted the field facilitator and village chiefs. Midstream, four wood markets were selected, two in Yaoundé and two in Douala. They were chosen based on their relatively large sizes and their importance in the bubinga trade {65;66}. Downstream, due to difficulties in accessing informants, Weng engaged in informal conversations with three Chinese bubinga traders and took detailed notes afterwards.⁸

Table 2. Typology of Upstream Informants.

Profession	Number of Informants
Tree seller (villagers who sold bubinga trees)	4
Log yard owner	3
Sawyer	6
Carrier	3
Intermediary	2
Previous employees at an established Chinese operation	3

4.2 Study limitations

Due to the sensitive nature of the subject, the study heavily relied on field facilitators and key contacts through previous CIFOR work on the informal sector. Additionally, due to time and resource constraints, participant observation and a quantitative livelihood impact analysis were not possible. Thus, the analysis relies heavily on informants' reported perceptions of their relationship, negotiating position as well as derived economic benefits if any. In order to minimise the limitations related to the sampling method and a reliance on perceptions in social science research, triangulation was attempted throughout interviews to increase the credibility of the findings and dissenting views are presented in the analysis. Additionally, approx. half of the interviews were carried out in French with the help of interpreters. To improve accuracy, when recording was allowed, the same interpreters transcribed the interviews in French and translated them to English. When recording was not permitted, detailed notes were taken in French and then transcribed into English.

⁸ The research was conducted prior to the establishment of CIFOR's Research Ethics Review (RER) process in 2015, which requires prior informed consent by all interviewees and/or approval by an RER committee to employ deception. In this case, the sensitivity of the topic is such that an informed consent process might in itself constitute a threat to the subjects (see e.g. Lee 1993, 18-43). At the time of study, the lead researcher considered anonymity of the three timber buyers and avoiding the bias of their non-participation to be of greater importance than their informed consent. This is in part precisely because they represent a class of informant treated as criminals and subjected to hostile undercover interview techniques (see e.g. REDD-Monitor 2011), which has the potential to damage both their livelihoods and reputations. This reasoning is subject to debate and ongoing consideration in future research.

Finally, the term “livelihood” in this paper primarily refers to accumulation of financial and physical assets through increased income. Many attempts have been made to define what should be measured within rural livelihood in development research; some focus on food security (Boudreau 1998), others such as the Sustainable Livelihoods Approach take a comprehensive approach by analysing five types of capitals (financial, physical, social, human and environmental) (Carney 1998). Due to constrained time and resources, this paper simply asked interviewees’ perception on the greatest changes that occurred from the changing rules of access in bubinga trade. This open-ended question allowed the interviewer to capture what supposedly was the most important to the interviewees’ livelihood in their own perception, namely the financial and physical assets. Nevertheless, the reader would be advised to note the relatively narrow parameters implied by ‘livelihood benefits’ in this paper and future research could explore other aspects of rural livelihood of forest-dependent communities linked to global timber trade.

5 Results

This study presents four key findings based on analysis of stakeholder interviews. First, Cameroonian small-scale operators from the existing informal sector actively participated in the informal bubinga trade. The value chain analysis revealed perceptions that the terms of participation in the trade were relatively favourable to these informal operators – in some instances, the value chain critically depended on facilitative role played by Cameroonian suppliers and intermediaries. Second, livelihood concerns and tenure insecurity were the main motivations for rural community to participate in the trade; the informal trade was seen as an opportunity to reclaim customary rights and bypass a state-imposed system perceived as unjust. Third, the trade provided forest-dependent communities with critical – albeit short-term – income and employment opportunities to buffer livelihoods against periods of economic difficulty and seasonal fluctuations in farm income. Finally, a number of interviews suggest that the partial export ban resulted not only in suboptimal social outcomes but also uncertain or non-existent environmental benefits: the policy effectively excluded rural, poor and less-politically connected actors from a lucrative trade while allowing politically and economically powerful actors to continue in that trade both legally and illegally; scant available research shows that legal bubinga logging is likely continuing at an unsustainable level.

5.1 Active and favourable participation of rural community

Let us first understand how the value chain configurations and the relationship between the actors. Based on interviews with 32 informants who were or had been directly involved in the bubinga trade, four configurations (or “models”) of informal supply chain for bubinga were identified (Figure 4). Importantly, a close working relationships between Chinese and Cameroonian small operators was evident; all models involved a degree of direct interaction between Chinese buyers/exporters and local informal sector participants (including tree owners, loggers and sawyers). Before the export ban, all four chain models were common. Both Chinese buyers and Cameroonian intermediaries preferred Model 1 (direct delivery to the port) as it was trouble-free for the Chinese and guaranteed high profits to the Cameroonian intermediaries. Model 2 was useful if a buyer did not trust an intermediary, in which case s/he would enter the forest to inspect prior to receiving the wood and potentially arrange transport of the product from that point. In Model 3, open timber markets in major cities played an important role: Chinese buyers come to source bubinga wood from the sellers.

In contrast, Model 4 channelled the highest profits to upstream communities who bypassed intermediaries and directly engaged Chinese buyers. Model 4 was possible when Chinese buyers had a direct relationship with a chainsaw miller {11}. In this type of interaction, Chinese buyers might enter the forest to confirm an order. Alternatively, in at least one village, a large group of Chinese (about 50) established a semi-permanent operation in 2011. They stayed for three months, bought trees directly from the villagers, and employed loggers, sawyers and carriers from the village. Since the partial export ban, model 4 has become rare.

Two characteristics relevant to rural livelihoods stand out from the value chain analysis. First, the bubinga trade was made possible because Cameroon already had a well-established informal timber sector and rural populations active in informal timber trade, which predated the Chinese demand for bubinga. Several interviews confirmed that Chinese buyers relied on local intermediaries and chainsaw millers in the informal sector {7;8;12;54}. Second, in some instances (Model 4), Chinese buyers negotiated and worked directly with upstream rural communities, beyond the government’s oversight based on informal working agreements. In this model, the bubinga trade bypassed the formal domain which has historically captured profits from Cameroon’s timber resources and prevented

small-scale rural operators from participating in global timber trade – allowing Cameroon’s rural populations to benefit directly from the trade, albeit informally. Beyond their integration to the chain, however, what were their terms of participation in the chain? Let us now turn to the internal governance of the chain.

5.1.1 Terms of participation for local actors

In addition to structural integration of rural populations and small-scale operators, interviews described highly lucrative trade, dynamic and competitive market, and favourable terms of participation to local operators. Below, we describe the vibrant informal bubinga trade prior to the partial export ban.

5.1.2 Increase in bubinga value after arrival of Chinese buyers

When the Chinese entered the market in 2010, the bubinga trade had transformed the rural logging scene and brought economic opportunity informal sector. The price of bubinga dramatically increased both upstream and midstream, doubling or quadrupling in value based on estimates given during interviews (Table 3). According to one long-term timber intermediary, “Before the Chinese arrived, bubinga was much less expensive and we could even have it for free” {21}.

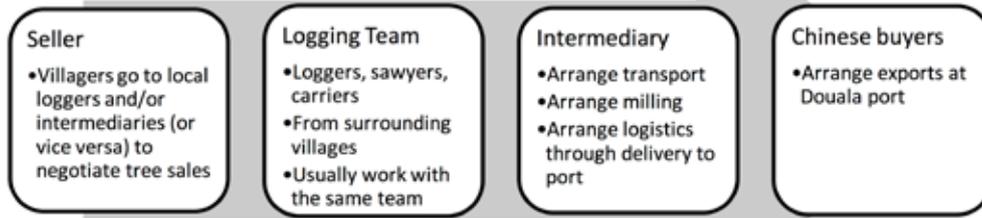
Table 3. Bubinga price: before and after Chinese demand.

	Sample size	Before Chinese (CFA)	After Chinese (CFA)	Change (%)
Upstream (in the villages)				
Price per tree	10	N/A (Not a popular species as a log)	25,000 ~ 1000,000	N/A
Price per plank	3	1,000 ~ 5,000 (avg 2,333)	2,000 ~ 10,000 (avg 6,250)	Approx. 170% increase
Midstream (in the city markets)				
Price per plank	9	5,000 ~ 8,000 (avg 6,100)	7,000 ~ 15,000 (avg 12,700)	Approx. 110% increase
Price per m ³	1 and 4	120,000 (1 estimate)	Avg 582,500 (4 estimates)	Approx. 380% increase

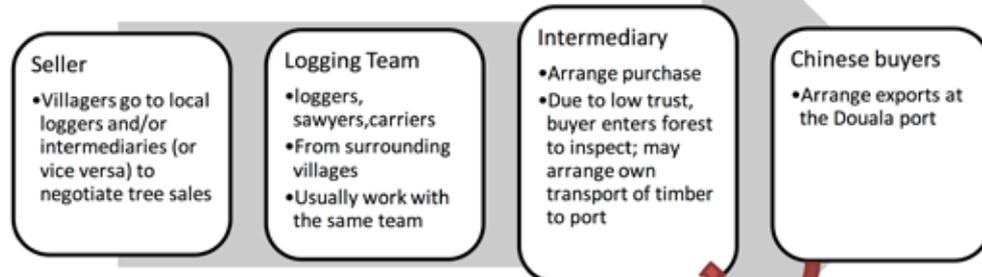
5.1.3 A dynamic and competitive market

Importantly, interviews described a dynamic and competitive market, which brought greater benefits to upstream and midstream participants. Chinese buyers were numerous, according to several informants there were too many to estimate {7;12;21}. Chinese traders on the other hand complained of fierce competition among themselves, which pushed up the price of bubinga upstream, resulting in better prices for villagers. One Chinese buyer remarked, “Now too many Chinese know about this. In the past, one could earn profits of 5000 CFA/m³, but now, some Chinese take for as little as 2000CFA/m³ (as a result of paying higher price upstream)” {8}.

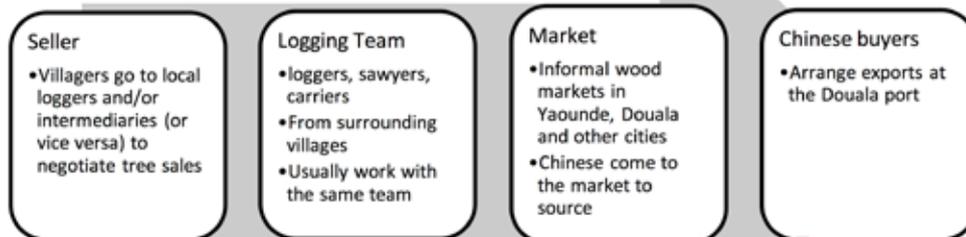
Model 1



Model 2



Model 3



Model 4

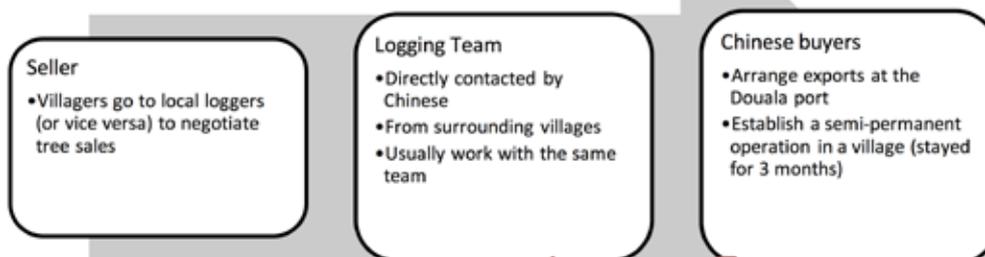


Figure 4. Four Models of Bubinga Supply Chain.

These interviews contradict with a common perception of illegal logging as organized by an exclusive group of traders, fixing prices through collusion (Mackenzie 2006). In contrast, the finding here indicates a relatively strong negotiating position of upstream and midstream actors due to competition among buyers for access to the resource.

5.1.4 Favourable terms of participation

Furthermore, rural participants in the trade generally perceived their working relationship with Chinese buyers to be favourable {11;12;21;34;61}. As one rural timber transporter said:

“They (Chinese) greatly helped us in financial matters. When they were here, we were friends. I even have pictures with them. They were helping us in many ways... we wish they were still here with us” {34}.

Specifically, three types of beneficial arrangements to rural operators were mentioned across interviews: forward financing, reliability and quick cash payments. First, forward financing by Chinese partners was the norm in the bubinga trade before the export ban {12;19;21;23;37;60}, especially among sellers and buyers who had established trust {12}. Forward financing also enabled rural operators to employ a team and purchase necessary parts for chainsaw equipment {17}. Additionally, reliability and speedy cash payments were also popular aspects of working with Chinese buyers {12}. These perceptions on the reliability of payments were widespread and consistent across all the interviews; only one instance of failed payment was mentioned however when a Chinese buyer did not deliver full payment after the delivered wood was seized by authorities {32-35}.

As if to reinforce such seemingly positive perception towards Chinese buyers in the villages studied, a number of rural operators also reported that they favoured bypassing intermediaries to deal directly with Chinese buyers, whom they considered more reliable and would give them more profit {11;18;19;23;24;27;28;29}. One transporter remarked: “If I had the opportunity to work directly with a Chinese [buyer], I’d prefer that because ...the [Cameroonian] intermediaries cause us trouble: they refuse to pay” {24}. Six informants complained about cheating of Chinese buyers by Cameroonian intermediaries {2;7;8;9;21;37}; this was cited as one reason why Chinese buyers eventually stopped forward financing – a key characteristic that enabled rural operators to participate in the value chain {21;37}.

In sum, with few exceptions, Cameroonian interviewees who directly worked with the Chinese buyers reported positive perceptions of their terms of participation, which was profitable due to the competitive market and positive working arrangements such as forward financing and payments in cash. Prior to the imposition of the partial ban, therefore, the governance of the bubinga value chain could be characterised as relatively favourable to upstream local participants.

5.2 Drivers for local participation: livelihood concerns and tenure insecurity

The second and third main findings of this paper are that villagers and rural operators were driven by livelihood concerns and tenure insecurity to engage in informal bubinga trade. As we shall see below, the bubinga trade served as an important income source for some to buffer against seasonal farming income, and for others (particularly the youth) to seek off-farm employment in a rural environment with increasingly limited land resources. Besides livelihood benefits, interviews also reveal how villagers – frustrated by tenure insecurity – engage in the informal trade to “resist” against what they perceived as unjust forest tenure policies imposed by the state, underscoring the important link between the informal timber trade and Cameroon’s elite-captured forest institutions in the formal domain.

5.2.1 The bubinga trade as a safety net

Focus groups and in-depth interviews indicate that villagers used bubinga trees as a safety net in times of financial difficulty. Table 4 lists the top reasons why villagers sold bubinga trees on their lands without licenses, which were poverty (10 informants) and urgent need for cash (7 informants). Specifically, proceeds from bubinga sales were most commonly used for medical emergencies and payment of school fees. According to one informant {13}: “I bought this bubinga from a friend. He was in need, he was sick. He wanted to seek care but he died”. And another {#29}: “The children must go to school and you, you leave your trees there...what is your child going to do?”

Table 4. Reasons for selling trees

Reasons for selling trees	No. of informants
1. Poverty	10
2. Urgent need for money	7
Specifically, proceeds were used to:	
Pay medical expenses	5
Pay school fees	4
Maintain the farm	1

Importantly, the bubinga trade seemed to have provided buffers against fluctuations in income from farm work. Six interviewees mentioned that the year-around wood activity greatly complemented their seasonal farm income, thus combating seasonal poverty prevalent in tropical countries (Devereux et al.2013, p75). Additionally, comparing the bubinga trade with farm work, the main livelihood option in the villages, the interviewees thought that the former provided much higher income.⁹ For example, for those who engaged in both farm work and timber business (12 informants), the bubinga trade was on average 10 times more profitable than farm work based on estimates provided {13;18;19;23;25}. One informant {25} reported that the bubinga business brought him 17 times more income than his farm work, which he reported as providing him with US\$1,400 a year (700,000 CFA).

5.2.2 The bubinga trade as a rural employment option

The informal bubinga trade seemed to have employed many local villagers as loggers, sawyers, and carriers, creating a vibrant local economy, as each village had at least “5 to 6 groups of foresters” {17}. In fact, according to two interviewees, the bubinga trade temporarily ameliorated a persistent unemployment problem among the rural youth in increasingly land-scarce communities {17; 24}. This is encapsulated in the words of one young transporter:

“...when I worked in the log yard, I no longer asked for financial assistance from my father, who has a cacao farm. I earned my 15000 Fcfa per week....it was a considerable sum. Now, all our eyes are on our papa’s cacao plantations” {24}.

After the partial export ban described later, one interviewee explained that the villages are now “crowded with young people doing nothing” and claimed that more ‘social problems’ have ensued though he did not elaborate on the problems {24}.

⁹ The comparison is a crude one due to reliance on self-reported perception and a lack of temporal perspective in our data collection.

5.2.3 Tenure insecurity

The second reason cited by rural villagers to participate in the informal trade was their tenure insecurity over their surrounding forest resources and a perception of illegitimacy and unfairness regarding Cameroon’s formal forest institutions {16;21;29;30;31;32;45}, Table 5 lists the top reasons mentioned.

Table 5. Reasons related to tenure insecurity to engage in the bubinga trade

Reasons for engaging in the bubinga trade	No. of informants
To protest against the illegitimate state ownership over forest resources	4
To benefit from forests before the government takes them away	4
To express dissent against the system (including its ineffective benefit-sharing schemes)	3

As a village chief mentioned, the villagers in the region still operated based on customary ownership {16}; as a result, villagers perceived logging company claims over their trees as illegitimate and unfair even if those logging titles were sanctioned by the government. A focus group discussion illustrates the extent of frustration among villagers regarding rights to access what they perceive to be their trees:

“The real problem is that we were born under the stalks of these trees, but we receive no benefit from them! People come and trade these trees that belong to us” {30};

and

“They (referring to a logging company) bring the stamp [permit] from the state and we can neither do nor say anything {29}; and finally “They (the company) even sell to Chinese [buyers]” {30}.

Not surprisingly, tenure insecurity featured prominently in interviews. The interviewed villagers resorted to selling trees before losing them to new concessions granted by the government. This race for the resource is illustrated well by these two remarks:

“When the government defines its concession, whether it goes through your farm or is drawn next to it, you will have nothing to say. This is one reason why we want to sell our trees as quickly as possible, in order not to be disadvantaged or trapped by the limits of a concession” {31};

and

“Even if we were to leave those trees, what do you think the Cameroonian government would give us when they cut them down? They would take those trees for themselves” {33}.

Additionally, the villagers view the trade as a way to be compensated for the 10% redistribution royalty that they are entitled to, but rarely receive in practice due to corruption. Below, remarks from a focus group conversation highlight the resentment this causes:

“I sell my wood (illegally) because the 10% of forest tax, we don’t see it” {31}.

“The forest tax is divided into 3 parts:...10% for the local population. But we see nothing” {30}.

“We are forced to sell” {29}.”

“Because if our 10% of forest rental were normally distributed, we will not act like this” {31}.

A civil society member echoes such views by calling the informal bubinga trade the rural communities’ “revenge against the administration” {45}. In other words, the upstream communities considered the informal bubinga trade an opportunity to reclaim their ownership over the surrounding forest resources and derive benefit from them. Many expressed a wish for the government to recognize their customary rights, as evident in a logger’s words: “I wish the government knows that we, the ones who own the resources, also have our rights” {13}.

5.2.4 Cameroon’s informal timber sector empowered

In summary, the findings on value chain configuration, role of local actors as well as the perceived livelihood and tenure benefits so far indicate that the informal bubinga value chain bypassed the formal elite-captured forest institutions and allowed rural populations to benefit from international trade of tree resources in their communities. The trade empowered the rural communities - in terms of economic gains, livelihood security as well as rights of ownership over their surrounding resources. As Figure 5 illustrates, the bubinga trade resulted in economic benefits and strengthened livelihood options for the villagers and rural operators, as well as providing an opportunity to reclaim customary ownership over forest resources. These factors related to the informal bubinga trade strengthened the informal domain of Cameroon’s forest regime.

It is important to recognize, of course that such a market does not provide a long-term livelihood solution under conditions of uncontrolled harvest. However, the short to medium term benefits were significant and left an enduring impression on the rural communities interviewed (per 13 interviewees). For the first time, it seemed, rural communities in this area were able to capture a satisfactory share of profits from the global timber trade. The benefits could be substantial: in one logger’s words:

“There is a positive change because... I couldn’t imagine owning a car but now I have one. I couldn’t imagine that building a house, but these are my two houses and also one in town” {11}.

The boom was short-lived, as the government stepped in to regulate the bubinga trade, and recaptured the lucrative trade, integrating it into the formal domain. As the rules of access to resources changed, the regulation seemed to have re-marginalised the rural communities as we see in the next section.

**Chinese Bubinga Trade Starts:
Empower the Informal Domain, Disrupts the Regime**

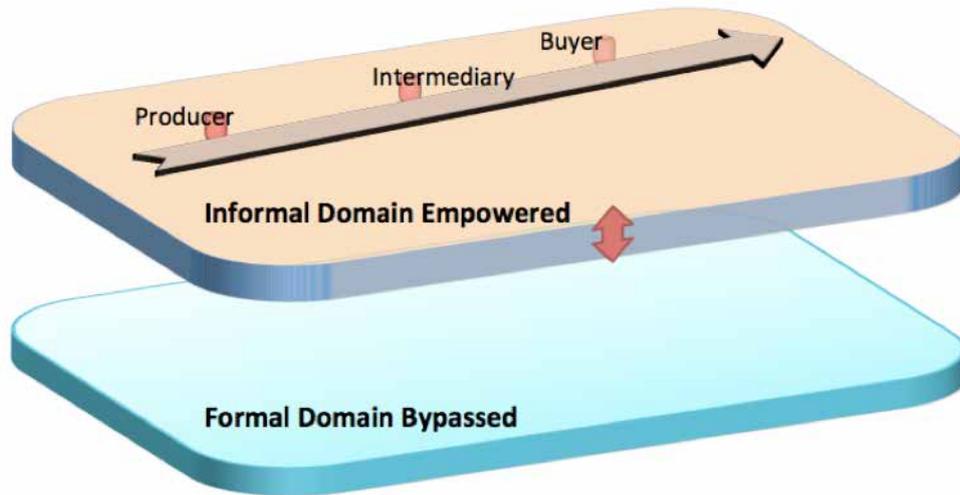


Figure 5. The bubinga trade strengthens the informal domain.

5.3 Government regulation and impacts on rural livelihoods

In April 2011 (renewed in November 2012), the government imposed a partial export ban that prohibited the export of the bubinga sourced outside concessions, effectively outlawing bubinga supplies provided by small-scale rural operators (i.e. the informal bubinga supplies discussed in previous sections). In interviews, rural informants bemoaned the deleterious impacts of this policy on their livelihoods. Although some rural loggers showed an understanding of the need to improve the sustainability of management and extraction of the bubinga resource, they urged the government to consider their needs and interests in policymaking, calling for a more inclusive policy to regulate bubinga trade and exports. This section explores the effect of the ban on the bubinga value chain configurations and the associated social and environmental implications.

5.3.1 Justifications for the partial export ban

The Ministry officially cited the need for a stock assessment to determine conservation measures as the reason for the regulation (MINFOF 2011; MINFOF 2012). However, interviews and the literature suggest that conservation of the species may not have been the only reason for the regulation: on one hand, the ban lacked a strong scientific basis, both in terms of estimates of the resource base and insufficiently substantiated claims about the negative impacts of chainsaw versus commercial logging; on the other hand the ban privileged larger more powerful actors who still maintained access to sources of bubinga timber.

First, in regards to the scientific basis for the ban, the ministry's initial decision (April 2011) was made solely based on the perceptions of government officials at the ministry and the customs. For example,

one ministry official cited as a reason for the ban simply the fact that “a large amount of bubinga was going out to China” {62}. Conducting an inventory of bubinga stocks was unfortunately not an option due to a lack of funding {38;62}; and government informants admit that the assessment leading up to the ban “didn’t go deeply” {62}. It can be argued that the government took a precautionary measure to conserve the species, however the partiality of the ban in favour of a different group of actors calls the conservation agenda into question.

Second, the only reliable evidence on bubinga stocks points to depletion of the resource within concessions (Betti 2012). However, the government ironically still allows for legal exports of bubinga originating from concessions under special authorization from MINFOF. A crucial fact that is that much of the area of informal bubinga logging linked to rural communities is located on “non-permanent forest” land designated by the government; these areas are officially designated for conversion to other land uses (as opposed to permanent forest areas designated for sustainable timber harvest to maintain forest cover) (Republic of Cameroon 1994; Cerutti and Tacconi 2006). In effect, the partial ban prohibits logging of bubinga in areas already designated for eventual land conversion, while allowing removal of the timber from concessions designated as permanent forest (where forest conservation and sustainable use is mandated by national policy); this in spite of evidence that bubinga stocks are threatened in exactly those concessions. It is reasonable to question, therefore, whether factors besides conservation may also have motivated the government’s intervention.

Finally, the sanctioned bubinga logging in concessions becomes more troubling given that the environmental impacts of industrial versus small-scale informal exploitation are disputed (Wit et al. 2010). While uncontrolled small-scale chainsaw milling can of course lead to overharvesting and logging in protected areas, heavy equipment used by industrial timber companies also damages forests (ibid.). Rural operators interviewed highlighted the environmental damage caused by industrial exploitation of bubinga {11;21;27;28}. One remarked:

“Those who cut in industrial concessions destroy the forest more ... for each bubinga that a UFA (concession) forester harvests, he destroys at least 10 to 20 small bubingas, because the engine has to enter: one has to make roads and dragging tracks” {21}.

Taking these three aspects into account, the conservation agenda behind the partial export ban may not be as strong as official rhetoric suggests. Indeed, prior studies have documented possible political motivations behind partial logging bans in other countries (Kaimowitz 2007). If the Cameroonian government indeed wants to achieve conservation and sustainable harvest of the bubinga species, it urgently needs to pay closer attention to potential over-exploitation within concessions. On the other hand, In the context of Cameroon’s forest regime, there are great opportunities for elite capture: the following section shows how the ban benefited a certain subset of the populations at the expense of rural communities and small-scale operators.

5.3.2 Impacts on informal value chains

The partial export ban effectively restricted the bubinga trade to the formal domain, which excludes participation by rural informal actors (Figure 6). As a result, the volume of the traded decreased significantly: except for one, all informal bubinga sellers reported a collapse of the market. More than half interviewees reported a 50% to 100% reduction in sales. In rural areas, interviewees reported how supply exceeded demand after the ban {11;12;37}. As a logger puts it: “we are interested in going to work more than the current level of demand (#11).”

Despite the decrease, many interviewees mentioned that it was still possible to export bubinga produced informally depending on the ‘legalisation’ (i.e. laundering) strategies used {7;8;11;12;37;46;52;53;61}. The partial ban essentially drew the informal value chain closer towards the formal domain, requiring

Chinese buyers to work closer with corrupt officials, politically connected intermediaries and concession owners to obtain papers for the bubinga produced informally. As a result, political and economic elites close to the formal domain were able to reap the benefits of the trade, reinforcing the elite capture of Cameroon's commercial timber trade, while small-scale loggers and rural communities are further marginalised. The next sections illustrate how this happened.

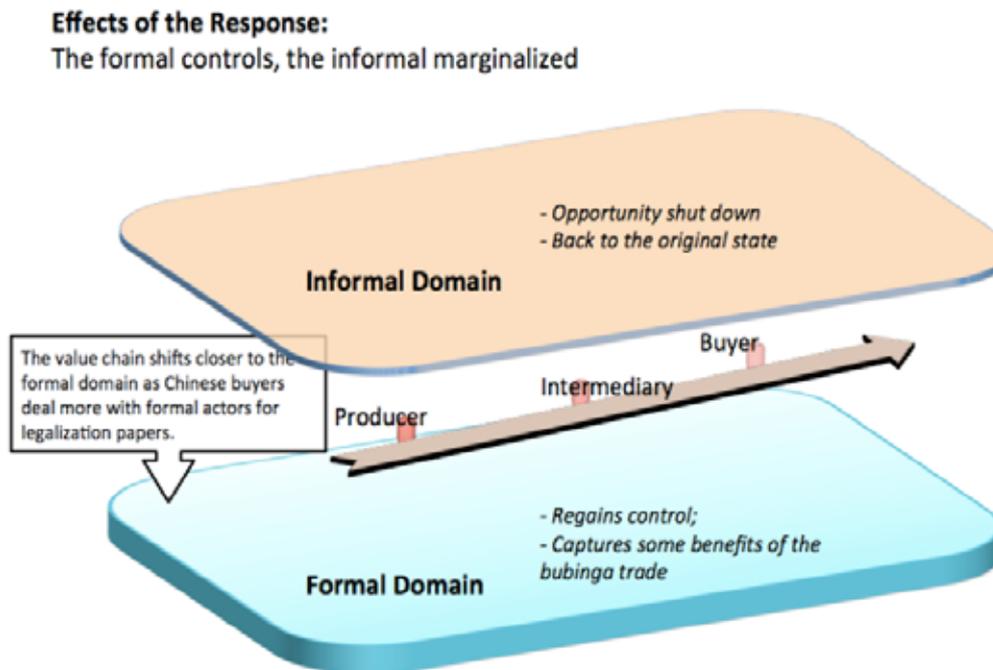


Figure 6. Effects of the export ban

5.3.2.1 Changes in supply chain models

After the ban, the informal bubinga trade became riskier and Chinese buyers began to source from politically-connected intermediaries as well as concession managers and sawmill managers with permits. Direct engagement with upstream villagers and small operators was inhibited {8;24}, and the Model 4 supply chain (see p. 16), the most profitable for upstream communities, disappeared.

This is illustrated at the midstream of the value chain: the partial ban affected politically-connected intermediaries less severely than counterparts without connections. Chinese buyers came to rely on such well-connected Cameroonian intermediaries to ensure the passage of harvested bubinga through checkpoints along transport routes. One intermediary highlighted the importance of official connections:

“You can get the sub-prefect for 50,000 and the brigade chief for 20,000, but it depends on your relationship. So there’s no fixed price” {1}.

Indeed, Cameroonian traders reporting ongoing business or only minor decreases in sales seem to be those who had worked in the informal timber sector for many years, and were thus presumably better connected than those with fewer years of experience (Table 6). As one successful intermediary put it: “If you are already old in something, it can’t really disturb you. We are in good collaboration with our authorities” {12}. The informal bubinga trade effectively was restricted to those who had been

in business longer and had more connections, while other operators without connections or enough money for bribes were excluded.

Table 6. Cameroonian bubinga actors: current activity and years in trade.

Still active or minor decrease in bubinga trade	Years in the informal wood sector	No longer active or major decrease in bubinga trade	Years in the informal wood sector
#1	28	#11	5
#12	17	#21	4
#24	15	#23	13
#26	16	#40	10
#27	13	#41	5
#53	14		
Average	17.1 years	Average	7.4 years

5.3.2.2 Increased demand for bribes

In order to maintain a position in the bubinga market, the need to bribe officials at all levels increased. Upstream in rural villages, stricter law enforcement meant more bribe-seeking and harassment by the authorities. According to one carrier: “Sometimes officials pay people 5000 franc to spy so that they can determine the location of clandestine yards, and they come to seize the wood” {17}. However, law enforcement still allows the bubinga trade to continue: it simply benefits other groups, such as corrupt authorities, while excluding rural operators. In the words of one villager: “After the forest authorities come and seize the wood, you do not even have a penny... and this prosecutor goes and bribes the authorities. The prosecutor retrieves his wood and heads to Douala, where he will sell it” {31}.

Midstream, similarly, Cameroonian intermediaries bribed officials at all levels: “It’s a chain: the sub prefect, the chief of brigade, the ministry’s divisional delegate, he also takes [bribes]...the commandant...we go all the way up to the prosecutor...”{1}. In fact, some officials do not only receive bribery while on duty, but also actively engage as participants in the trade. For example, an intermediary explains how a ministry official accompanies him as he passes through checkpoints: “At a check point, you park far away...there is even an escort car [that goes first to negotiate]. This guy is from the ministry, a colonel that we hire...”{1}.

Downstream, Chinese informants confirmed the increasing cost of bribery {7;8:9}. One Chinese trader commented that it has rendered the bubinga business unprofitable: “Today, it is very difficult to maintain guanxi [connections] here. Everyday they want money. If the bubinga is seized, you need to quickly go and give some [money]” {7}.

5.3.2.3 Changes in the legalization process

Changes in legalization strategies – the various ways in which informal bubinga logs and sawn wood without permits are “laundered” with documentation for export – benefited elite actors and squeezed rural operators out of the bubinga trade. After the partial ban, exporting bubinga necessitated manipulation of formal papers and permits. Legalization took at least three forms: 1) laundering timber through formal timber businesses in the private sector 2) asking controllers to seize shipments and obtain the legal papers through auctions of the confiscated timber {4;11;29} and 3) having containers of timber sealed by customs officials upstream, such that they could not be opened without a court order {1;2;8;12;45;48;60}. The second and third methods involve collusion with officials and official bribery payments.

Meanwhile, the first method involves obtaining falsified paperwork from private sector companies. Private sector actors selling “legal” documentation include industrial concessions {18;21}, sawmill managers {1;12;37} or community forest managers {11}. By working together with these formal operators, Chinese buyers can obtain the necessary papers and permits. These papers are then used to either mix illegally-sourced and legally-sourced timber {11;18;21} or to hide sawed bubinga timbers with other legal species during transport {12}. These changes benefit well-capitalized owners of concessions and sawmills as well as local elites. As Chinese traders have started to work mostly with formal Cameroonian businesses, rural informal operators are left out, according to one log yard owner {18}.

5.3.3 Impacts on rural livelihoods and perceptions of deprivation

As described above, the export ban benefitted formal domain actors, including private operators and authorities who game the system, while excluding upstream communities and small operators and perpetuating the extractive nature of forest governance in Cameroon {11}. Upstream operators’ livelihoods were affected by this change in at least three ways. First, they lost the most profitable model of supply chain (Model 4), in which they directly worked with Chinese buyers and reaped the highest benefits. Second, they were slowly excluded from the bubinga trade as Chinese buyers engaged more with established private sector players for their legal papers. Finally, buyers stopped forward financing, which was crucial for the upstream actors living on subsistence income and reduced their risk. A log yard owner put it thus: “Before, the majority worked with forward financing and now...you can decide to engage yourself working with your own funds, but if the wood is seized, what are you left with? What are my kids going to eat?” {17}.

The partial ban instilled rural informants with a sense of grievance and injustice. Expressions of these feelings were sometimes poignant: “We do not understand Cameroon...in everything we do, we, the villagers, lose...It is the administration who is the winner, the control is with them” {17}...“Who comes from the ministry to this [rural] place to give us bread? Nobody. So as to the Cameroonian government, I don’t see what can be said about improving our lives in the rural area” {29}.

Apart from the government, several informants also criticised other vested interests within extractive institutions such as formal private actors {26;27} and “Europeans” who, in the mind of some upstream actors, were intent on preventing Chinese involvement in the bubinga trade {12;17;19}. Some rural operators perceived European timber businesses as politically connected to the government, influencing the policies that had led to their marginalization, and thus a part of the extractive forest regime. An operator speculating about the competition between Chinese and Europeans in the timber sector said: “Bubinga really took off in the market. Since then, the Europeans had no more place in the market; their demand was neglected” {17}. In the rural interviewees’ minds, the influence of

these interests led the government to step up law enforcement and impose the partial export ban. This assumption is well-expressed by the following words: “[p]eople say that the government banned the (bubinga) market because they [Europeans] were unhappy that the Chinese had won the whole market” {17} or “it seems to be that the French people want to put an end to this [bubinga export to China]” {19}.

Blaming the government and foreign entities associated with elite power for the partial ban that excluded them, marginalized rural actors came to assign, whether rightly or not, a corresponding perception of beneficence to Chinese timber buyers. A particularly strong expression of this perspective was: “The Chinese have helped us to get out of this poverty with the bubinga trade...but what we found is that the government discourages them from making an effort to help us” {21}. Such perceptions are not limited to marginalized actors, but may reflect one side of a widespread narrative that ping pongs between dominant stereotypes of “Chinese” as resource grabbers or providers of needed economic opportunity and development, and “Europeans” as colonial usurpers or promoters of environmental interests and social justice. In the words of senior government informant:

“Some (Europeans) have exploited timber in Cameroon for 50 years, and yet, they have not even build a road leading to the villages. And now they are trying to give us moral lessons! If a villager sells a tree at CFA 1million, then what is the real benefit to the community? Do you think that we need certification and such things? Between legal (exploitation) by Europeans and illegal by Chinese...between those who pay officials in Yaoundé to make this law and get that permit and those who go into the forests and pay local villagers...who is more legal and more illegal?” {54}.

Of course, such views are reactive perspectives offered in response to complex realities and unexplored trade-offs. The informal bubinga trade brought short-term economic benefits to socioeconomically marginalized communities, but did not solve the problem of marginalization. Associating the benefits of the boom with an intention on the part of Chinese buyers to “help” marginalized actors is probably misguided as explained below, however it reflects how rural communities view Cameroon’s formal forest governance system in which economic exclusion and extractive behaviour by those with power has become institutionalized.

In conversations with a few Chinese traders {7-9}, there was no interest in investing in Cameroon’s rural development. In one case mentioned by a Cameroonian bubinga market intermediary, a Chinese buyer refused the Cameroonian partner’s request to provide investment for the purpose of setting up a community forest, so that the communities could harvest bubinga in a legal manner {12}. These Chinese actors were, after all, small-scale entrepreneurs themselves. In reaching far up the supply chain to source timber directly from rural forest communities, they became popular for a time. Notably the win-win relationship between the upstream and downstream in this case – with a higher share of market value going to rural sellers and operators and more access to timber at lower prices to Chinese buyers - could only have happened at the expense of the midstream.

5.3.3.1 Suggestions from rural communities

Despite showing a certain eagerness to profit from informal trade, rural informants were not ignorant of the potential environmental damages associated with an unfettered timber boom {11;23;27}. When asked, however, about the importance of bubinga trees to their communities beyond economic values, one villager commented that they had “no choice” because of poverty {33}. In light of such a dilemma between development and environmental protection, rural operators expressed understanding of the need to regulate the trade. However, a number of interviews strongly suggested a form of formalization that increased fairness as a first step toward regulation {11;13;16;17;19;27}. Put simply: “If we need permits, let the government make them available to everybody” {#17}. Contrary

to villagers' hopes, however, the partial export ban has essentially allowed the formal forest domain to capture the benefits of the lucrative bubinga value chain, leaving rural communities "abandoned to [their] sad fate" {17}.

6 Discussion

This case on the informal bubinga trade in southern Cameroon – although highly context-specific – presents four points relevant to the broader debate on international forestry policy, multi-level forest governance and particularly to the involvement of Chinese entrepreneurs and companies in the global timber trade.

6.1 Rural livelihoods benefits

Although the illegal timber trade can and often does entail negative impacts on vulnerable rural communities, the bubinga trade with Chinese buyers brought significant, albeit short-term, economic benefits in the form of cash income, a short-term safety net and employment opportunities to communities traditionally excluded from the global timber trade. Access to these benefits were possible precisely due to the informal nature of the bubinga supply chains, which allowed rural operators to bypass extractive institutions and elite actors that traditionally capture the benefits of trade in Cameroon's forest resources. However, those institutions and actors in the formal domain soon reclaimed their control over the trade and re-marginalised informal operators following the partial export ban.

Past research has referred to the positive livelihood opportunities afforded by the informal timber sector in Cameroon (e.g. Cerutti et al. 2011). This bubinga case further illustrates the economically beneficial link, via the informal domestic timber sector, between rural livelihoods and illegal exports of a precious timber species. This case also identified the function of the informal trade as a safety net against seasonal fluctuations in farm income, a contribution that should not be underestimated given the persistent problem of seasonal poverty in developing country peasant communities (Devereux et al. 2012, p10).

Although significantly more research would be needed in order to generalize about the accrual of benefits to rural households, in particular beyond relying on their perceptions, this case study nevertheless urges a reconsideration of some key assumptions regarding the legal timber trade, which is captured by elite actors in many countries, versus the informal timber trade, which is often the only opportunity for rural communities to benefit from the sector if legal permits are beyond their reach. In particular, this case study calls for reflection on multi-level forest governance initiatives, including such policies as FLEGT, which rely on national forest laws to deliver socially equitable and sustainable outcomes from formalized forest management and trade in many tropical countries.

The results presented here are given with two caveats. First, trade in a resource such as bubinga is unlikely to provide long-term livelihood benefits if logging were to continue above a sustainable level. Yet, at least in this specific case, interviews indicated that villagers used bubinga cash income to re-invest in long-term poverty alleviation pathways such as education, hospital care, farming equipment and house construction. Further research would be needed to substantiate these findings and assess the trade-offs between short-term cash accumulation and long term environmental risks of informal logging to supply a large insatiable market such as China. Second, large cash influxes in a subsistence economy may not lead to improved household livelihood security in some instances. As Coad et al (2010) illustrate in the case of the bushmeat trade in a Gabonese village, large cash influxes may be spent on goods that do not benefit families, such as alcohol and cigarettes. In this study, although there was no way to observe household spending directly, consistent and detailed accounts of using

the available cash for schooling and medical care suggest that the funds did contribute to household security; however further study is needed to substantiate this point.

6.2 Questionable conservation outcomes

Few, including informal loggers themselves, dispute the environmental risks associated with the bubinga timber trade, and the resulting need to regulate it. However, the partiality of the Cameroon government in terms of how it curtailed the informal trade from largely the non-permanent forest estate the trade raises questions about the motivations of the policy and its effectiveness in conserving the bubinga resource. Findings suggest that the partial ban is at best an incomplete conservation measure, as it ignores the likelihood of over-extraction from the permanent forest estate and continued informal flows facilitated by corruption. At worst the policy could potentially be seen as a political tool of extractive institutions and the elite and institutions to reclaim control over a lucrative trade. Ultimately, when evaluating policy effectiveness, environmental gains must be weighed against the lost livelihood opportunities of rural communities who critically depend on the surrounding forest resources.

6.3 The relative roles of Cameroonian and Chinese market actors

The value chain analysis identifies the essential and facilitative roles played by the Cameroonian actors: as customary owners of trees, sellers, loggers, millers, transporters, traders and collaborative officials. Although environmental groups' reports about illegal timber trade tend to emphasise the role of Chinese businesses, this case study illuminates the critical role played by Cameroonian participations – revealing that the illicit trade and its value chain configurations are driven as much by the Cameroonian participants as by Chinese buyers. In particular, the bubinga supply at the time of fieldwork exceeded demand, because the rural villagers were motivated to harvest driven by livelihoods concerns and tenure insecurity. This case study urges analysts of the illegal timber trade to pay closer attention to the value chain configurations, the underlying drivers such as existence of informal timber sector, and the overall political economy of resource governance in the host country in order to make informed policy suggestions.

6.4 Social equity and extractive forest institutions

Finally, this paper demonstrates that forest policies addressing the illegal timber trade – national, regional or international – need to pay greater attention to social equity in policymaking and implementation in order to minimise negative impacts on rural livelihoods. Particularly in multi-level forest governance, which relies heavily on national legal frameworks, international policymakers need to be aware of the fact that “[t]he (national) legal framework... is often profoundly anti-poor, if not always in its conception, at least in its operation (Brown et al. 2006, p85).” In other words, proponents of legality-based instruments ought to consider whether a legality permit is granted fairly or abused by authorities to extract profits at the expense of vulnerable populations. As the case study demonstrates, rural operators also share concerns for the sustainability of forest resources – however they urged the government to consider their needs and interests in policymaking, calling for a more equitable approach to resource formalization.

7 Conclusion

This paper aimed to understand the organization of an informal timber trade value chain, its effects on rural livelihoods and marginalization, and the impacts on rural livelihoods when rules of access to resources change through regulation. Key findings were that rural Cameroonian loggers and communities participated in the bubinga trade on relatively favourable and lucrative terms. Second, that rural operators were motivated by livelihood concerns and tenure insecurity and used the informal trade as an opportunity to resist a system they perceived to be unfair. Third, albeit unsustainable in the long-term, rural communities reported substantial improvements to their livelihoods through cash income and employment opportunities. Finally, while achieving questionable environmental benefits, the partial export ban took away such benefits and excluded rural participants from the lucrative trade as the elites in the formal sector gained control.

This case study demonstrates that, under an extractive forest governance regime in which political and economic elites capture forest resources for their own benefit, the informal timber sector – which enabled the illicit timber trade - provided the only pathway for rural communities to benefit from the global timber trade. Contrary to common perceptions in the grey literature, the trade was both lucrative and the terms of participation favourable to rural communities. Through a partial export ban, the government intervention deprived rural communities of a crucial source of income and employment, while the conservation outcomes are unknown. As suggested previously by Putzel (2009), implementation of a policy for the environmental (or conservation) reasons at the expense of rural livelihoods should at least succeed in delivering on the environmental goals.

This research has three key implications. Firstly, within the theoretical literature, researchers should seek to conceptualize explicitly the informal governance domain as a part of the forest governance regime in countries where natural resource governance is captured by elites. When evaluating the effects of forest policies in an extractive regime, a legal pluralism approach would allow for the inclusion of marginalized actors, and would thus provide a more comprehensive assessment. This is particularly pertinent to multi-level forest governance in tropical countries where the established forest governance regime consists of marginalized informal actors and extractive formal institutions. In Cameroon's case, this paper shows that direct (though illegal) engagement with foreign buyers may permit marginalized communities to escape poverty and capture the trade benefits usually retained by extractive elites. International aid policymakers, national policymakers and NGOs should keep in mind how such an informal trade is able to bypass the traditionally rent-capturing formal domain and directly bring benefits to rural communities.

Second, the findings are pertinent to the charged debate on the role of Chinese actors and market in the global illegal timber trade. Contrary to common expectations, this case study found that the direct connection of rural communities to buyers brought significant short-term benefits to village residents. Trade with Chinese buyers was also an opportunity to resist and escape from a forest governance system informants perceived to be unfair and illegitimate. The active participation from upstream villagers and small-scale operators made the illicit trade 'as much Chinese as Cameroonian.' Further research is certainly needed before the findings of this case study can be generalised to other instances in which Chinese players play a key role. In future studies, livelihood impact analysis in particular would be useful in quantifying the economic benefits accrued. Nevertheless, given the sensitive and political nature of the debate surrounding the role of Chinese players in illegal logging in the global South, affected by deeply ingrained biases (Mawdsley 2008), future reports and studies need to examine comprehensively the complexity of forest governance in the host country and the potential role of the domestic informal sector in facilitating China-linked illicit trade before drawing

conclusions. This is particularly relevant to the Congo Basin countries, where extractive forest institutions have created a large informal timber sector serving domestic markets.

Finally, in countries where, as in Cameroon, rural poverty is rife, tenure insecurity persists and formal forest institutions are captured by elites, how can policymakers conserve forest resources while allowing forest-dependent communities to share in the benefits of logging and trade? In discussing the bubinga export ban, many of the rural operators asked, what is the best policy that would enable an average Cameroonian to benefit from the country's abundant forest resources? Yet, the informal trade does not provide a long-term solution for the environment or rural livelihoods despite the short-term economic benefits. Neither does the regulation installed by the government guarantee conservation of bubinga while rural communities bear disproportionate cost from the regulation *via-a-vis* industrial concessions and others connected to the power. One step forward could be light-touch formalisation of the domestic informal sector upon which rural loggers depend, ensuring a relatively low cost of compliance for small-scale activities compared to the current small-scale permit regime. Such formalisation efforts would have to be followed with adequate monitoring system to avoid abuse of small-scale permits. The success of such policies however would ultimately rely on the extent to which the formal forest institutions – and decision-makers behind them – will make serious efforts for sharing the benefits with their countries' rural poor.

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Appendix: List of Informants

ID	Interview Date	Occupation	ID	Interview Date	Occupation
1	2/7/13	Trader	35	19/07/13	Chin. co. worker
2	10/7/13	Others	36	19/07/13	Seller
3	10/7/13	Logging company	37	22/07/13	Sawmill
4	10/7/13	Government	38	23/07/13	Staff int'l org
5	10/7/13	Government	39	23/07/13	Trader
6	10/7/13	Logging company	40	23/07/13	Trader
7	10/7/13	Chin. wood exporter	41	23/07/13	Trader
8	10/7/13	Chin. wood exporter	42	23/07/13	Trader
9	12/7/13	Chin. wood exporter	43	23/07/13	Trader
10	16/07/13	NGO	44	24/07/13	Gov. official
11	17/07/13		45	24/07/13	NGO
12	17/07/13	Intermediary	46	25/07/13	Others
13	18/07/13	Logger	47	25/07/13	Gov. official
14	18/07/13	Sawyer	48	25/07/13	Gov. official
15	18/07/13	Sawyer	49	26/07/13	Others
16	18/07/13	Chief	50	26/07/13	Trader
17	18/07/13	Logger	51	26/07/13	Trader
18	18/07/13	Log yard Owner	52	26/07/13	Trader
19	18/07/13	Transporter	53	26/07/13	Trader
20	18/07/13	Transporter	54	26/07/13	Gov. official
21	18/07/13	Intermediary	55	29/07/13	Trader
22	18/07/13	Seller	56	30/07/13	Staff int'l org
23	18/07/13	Sawyer	57	30/07/13	Trader
24	18/07/13	Transporter	58	30/07/13	Trader
25	19/07/13	Log yard Owner	59	30/07/13	Trader
26	19/07/13	Sawyer	60	30/07/13	Trader
27	19/07/13	Sawyer	61	30/07/13	Trader
28	19/07/13	Sawyer	62	30/07/13	Gov. official
29	19/07/13	Seller	63	30/07/13	Researcher
30	19/07/13	Seller	64	30/07/13	Researcher
31	19/07/13	Seller	65	30/07/13	Researcher
32	19/07/13	Seller	66	30/07/13	Researcher
33	19/07/13	Chin. co. worker	67	30/07/13	Researcher
34	19/07/13	Chin. co. worker			

As a case study on the social and environmental implications of legality-based policies, this paper traces the recent history of the trade in bubinga (*Guibourtia* spp.), a highly valuable leguminous hardwood species endemic to western Central Africa. After an explosion of demand for bubinga timbers in China sparked an increase in logging and exports, the species was targeted by a partial export ban in 2011. Using an analytical approach combining value chain analysis and legal pluralism, this paper provides a critical analysis of an example in which governance of the timber trade has likely exacerbated inequitable resource access, with unclear outcomes in terms of conservation of the resource base.



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