

REPORT

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Insights from land tenure, mining, fisheries, and non-timber forest products

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Reports

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Executive Summary

Over the past decade, the European Union, along with a global network of national and international institutions, have engaged in a multi-faceted effort to combat the international trade in illegal wood. The EU's Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan is potentially the most powerful instrument of policy change in the global timber trade regime. Now, timber exporting countries and firms are in a process of adjusting to a far-reaching set of new trade rules that transcend national borders and affect national forest-related legislation and documentation of its enforcement.

The EU's process has resulted in new attention to the internal workings of domestic timber markets in producing countries. In some of these countries voluntary partnership agreements (VPAs) with the EU, developed to facilitate legal timber exports to Europe, contain preconditions for the "formalization" of domestic timber access and trade. Processes of formalization, legalization or codification of rights to access and trade in natural resources and land have been the subject of much research. . Formalization is a key component of effective state governance, because it makes land, people, and their activities legible, taxable, and governable (Briassoulis 1999; Meinzen-Dick and Mwangi 2009). Many studies, however, have sought to understand the nature and effects of contradictions between, on one hand, customary systems of ownership or tenure, often quite formal by nature though sometimes not recognized as such and, on the other hand, legal systems imposed from a higher scale. In formerly colonized countries, such legal systems may be based on foreign concepts of resource/land commodity ownership.

It is significant therefore that the EU requires legal review and reform in VPA partner countries and recognizes the potential of enforcement to negatively affect small producers and families dependent on forests. Without secure rights to land and resources, implementation of the legal frameworks regulating the latter's use, vulnerable people risk losing important sources of income. It is therefore logical to consider, in reviewing national legislation, how to include what is termed "customary" law and practice.

Currently and in recent years there have been international and national efforts to formalize land and resource ownership in developing countries. Among these efforts, there are many examples of bona fide efforts to create or enhance public goods. For example, formalization efforts to prevent the uncontrolled access and trade in diamonds, gold, and other conflict minerals are geared to reduce financial flows supporting armed conflict, to prevent labor abuse, and (occasionally) to avoid environmentally destructive practices. In Southern Africa, some efforts to govern extraction and trade in valuable plants have been grounded in well-intended concern of civil society over the intellectual property rights and harvesting rights of local and indigenous people. In Brazilian Amazonia, floodplain community efforts to increase their control over local fisheries and prevent over-exploitation by outsiders have resulted in a number of measures to regulate access to inland fishing areas.

Several recent studies by forestry researchers have attempted to measure the livelihood importance of informal timber cutting and selling, and to address how such trade could be legalized without negative livelihood outcomes. To better inform this discussion, we brought together researchers on forestry, fisheries, artisanal mining, and land tenure to share lessons about the current and historical

reasons for formalization efforts, their positive and negative outcomes in terms of efficacy for resource management, corruption, human rights and livelihoods of local people, including women and marginalized groups.

The cases describe a range of instruments related to resource access, transport and trade. The closest parallels to FLEGT were found in the case of minerals traded from the DRC. A number of the mechanisms developed to regulate flows of minerals from sensitive areas of the DRC to the international market may inform EU efforts to exclude from its supply chains timber originating from informal domestic markets in VPA signatory countries.

In general terms, the case studies suggest a number of potentially positive outcomes, though they come with a number of potential negative trade offs which need to be carefully assessed and which are detailed within this paper. Potentially positive outcomes include the following:

- *Increased visibility of activity vis-à-vis land and resource access and trade*
- *Clarity of ownership with alienation rights*
- *Clarity of use rights*
- *Power to administer punishment*
- *Centralization of power and authority, increased oversight by the state*
- *Reduced conflict over resources; reduced flows of resources to armed groups*
- *Empowerment and financial benefits to local resource users*
- *Implementation of better employment practices*
- *Prevention of environmental injustices*

Based on all cases, we have also identified a number of potential risks associated with formalization that need to be considered as the VPA process becomes the source of interventions in national domestic timber sectors in producing countries. VPAs interact with policy and practice in a broader governance context which comes with its own inherent challenges that may exacerbate these risks, including failure or reversal of the formalization process itself, the potential expropriation or exclusion of communities from forest lands where titles have not been recorded, as well as loss of resource rights. In some cases, these losses disproportionately affect marginalized groups, including women, who are often excluded from decision-making. As access rules change with the VPA process, there arise new potential barriers to entry in the market, increased poverty, accrual of power and capital by certain interest groups and elites, criminalization of economically vulnerable actors and conflict. In terms of efficacy, efforts to formalize could, in some cases, lead to the introduction of new forms of unsustainable forestry practice as well as elite capture of benefits and new forms of corruption.

To improve the outcomes of formalization processes, we suggest the following policy approaches:

1. Pay particular attention to the inclusion of human rights and customary law while reviewing all laws relevant to the forestry sector. Without such a review—which to date has not been completed—the VPA effort faces the potential for failure in the countries who are already adopting these processes. The case studies included in this report show that a formalization effort requires articulation with existing practices in order to function without engendering the series of risks outlined above. In countries that have already signed VPAs and where formalization is in process, monitoring of the social effects is recommended.

2. In the process of reviewing customary law (and rights and practices), take into account less visible uses of land and resources, including seasonal activities and occasional uses by particular social groups, including migrants.
3. In development of new rules to govern small-scale artisanal (and currently informal) logging practices, seek to understand how use of particular cutting and transport equipment might relate to sustainable harvest and trade. (For comparison, specifications on minimum size of fishing nets have been used to prevent overfishing of small and juvenile fish).
4. In reviewing customary laws, rights and practices, study their history to ensure that the current status is not the current manifestation of a highly dynamic system of resource access, ownership and trade. This is important in order to avoid the potential negative outcomes associated with “writing in stone” a current practice that may be only one of many options used by social groups over time, and where equity and environmentally sound management depend on flexibility.
5. In each VPA country, assess to what degree formalization in response to VPAs is likely to favor the land and/or resource ownership rights of large-scale vs. small-scale actors and private vs. communal owners or users.
6. If a program of formalization of the domestic timber market is undertaken in VPA signatory countries, rules should be examined in the context of the different characteristics of different timber resources. This might begin with a typology of timbers according to their ecological role and regeneration patterns, with fewer restrictions placed on fast growing, ecologically unexceptional, and quickly replaced endemic timbers.
7. If new rules are imposed, they have to be enforceable as well as equitably and consistently enforced to avoid a culture of impunity that undermines the system. This means that a “scalar” approach to enforcement might be advisable, with the “weakest” parts of the sector being granted a “period of grace” or of learning before implementing and enforcing any new rules. Rules must be fair and without deleterious effect on any stakeholder group, but there remains in most countries a huge gap between the capacities of large-scale, formal companies vs. small-scale, informal ones to influence and abide by the law.
8. Consequences of violating new rules must not be so great that local people have incentives to remain informal or to bribe officials to avoid punishment. I.e. the cost of complying should not be greater than the cost of operating illegally. For this to become a reality, in many VPA countries the Ministries of Finance and Justice must be included into discussions about the future of the sector to a much higher degree than has been done to date. Formalization of the informal forestry sector cannot be accomplished by Ministries of Forests or Environment alone.
9. Identify ways to link the European market directly to providers that acquire timber from well-managed community/communal and small-scale forests e.g. by either subsidizing the licensing procedures or reducing their costs, based on regular evaluation of forest management. A “closed pipeline” model (such as developed as one of the instruments of

formalization of artisanal mining) or certification (e.g. SLIMF certification¹) may be useful. However, efforts would need to be taken to ensure that selective purchasing does not exacerbate local inequities. Such assurances could be achieved by following recommendations two and three (above) to fully understand user groups, dependencies on various resources, and the power dynamics in the area of interest.

- 10.** Develop approach in formalization that addresses the complexities of regulation and enforcement in international transboundary landscapes. For example, efforts to control illegal mineral trade in the Great Lakes region of Africa addresses both resources access, domestic commerce, and transborder movements of minerals. This would also necessary for timber, especially in regions with challenges similar to those of the DRC, with its porous border and recent history of conflict.

¹ Certification of small, low-intensity managed forests (SLIMF) is an eco-certification for timber extracted from or produced according to simplified forest management criteria geared towards smallholder and community/communal managed forests. See, e.g. Putzel et al. 2012.

Abbreviations

3Ts	Tin, Tantalum and Tungsten
ABS	Access and Benefit Sharing
BMZ	The German Federal Ministry for Economic Cooperation and Development
BGR	The German Federal Institute for Geosciences and Natural Resources
CAR	Cameroon
CBD	Convention on Biodiversity
CITES	Convention on International Trade in Endangered Species
CoC	Chain of Custody
CTC	Certified Trading Chains
DFID	Department for International Development
DRC	Democratic Republic of Congo
EC	European Commission
EU	European Union
FC	Forestry Commission
FLEGT	Forest Law Enforcement, Governance and Trade
FPIC	Free Prior Informed Consent
FSC	Forest Stewardship Council
IBAMA	Brazilian Institute of Environment and Renewable Resources
ICGLR	International Conference of the Great Lakes Region
ILO	International Labor Organization
IOM	International Organization for Migration
ITRI	International Tin Research Institute
iTSCi	ITRI Supply Chain Initiative
LAS	Legality Assurance System
NCI	National Certification Initiative
NGO	Non Government Organization
NTFP	Non Timber Forest Product
RCM	Regional Certification Mechanism
RINR	Regional Initiative on Natural resources
ROC	Republic of Congo
SAEISSCAM	Service for Assistance and Organization of Artisanal and Small-Scale Mining
UK	United Kingdom
UN	United Nation
US	United States
VPA	Voluntary Partnership Agreement
WWF	World Wildlife Fund

1. Introduction

1.1. Formalization of domestic timber production and FLEGT-VPA

“Forests are a component of a system, along with people, their institutions and politics, climate, markets and a host of other variables. When one component of the system is changed the full effect is mainly unforeseen and there are significant impacts on other parts of the system” (EC 2012).

“The outcomes of... formalization programs—the variations in their effects—differ because of the varied historical, geographical, and social contexts within which they have been applied. Any formalization program will articulate with, change, or be changed by pre-existing legal, political, social relations and institutions, as well as with the differences characterizing them” (Peluso, Kelly and Woods 2012).

Over the past decade the European Union, along with a global network of national and international institutions have engaged in a multi-faceted effort to combat the international trade in illegal wood. The EU’s Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan is potentially the most powerful instrument of policy change in the global timber trade regime. Now, timber exporting countries and firms are in a process of adjusting to a far-reaching set of new trade rules that transcend national borders and affect national forest-related legislation and documentation of its enforcement. These rules are designed to overcome the problems of illegal logging and timber trade which, enumerated by Duncan Brack (2012) “cause environmental damage, hinder sustainable development, cost governments billions of dollars in lost revenue, promote corruption and undermine governance and the rule of law.”

The EU approach requires either demonstration by importers of “due diligence” supported by documentation that the wood was legally sourced, or a FLEGT license (Cashore and Stone 2012). A FLEGT license signifies that the country of origin of the timber is a signatory to a bilateral agreement with the EU called a Voluntary Partnership Agreement (VPA), which is based on a legality assurance system (LAS) and other agreed provisions. Effectively, the FLEGT license exempts importers of timber from further due diligence requirements (BSI 2012). As a mechanism negotiated between states, it has potential to overcome the hesitancy of individual firms to comply with standards such as third-party timber certification, which because it is voluntary, only attracts a subset of “progressive companies” (see, e.g. Cerutti et al. 2011).

The FLEGT-VPA process has to date involved a highly organized and concerted effort to foster forest sector reform – both technical and political – in timber producing partner states. According to the NGO FERN, whose mission is to follow the EU’s forest-related policies², the focus on better sector management and governance arose from a concern that such requirements might simply encourage

² See FERN’s website at <http://www.fern.org>. Accessed December 16, 2013.

national governments to “water down” their environment-related laws and enforcement measures to facilitate compliance by timber exporters (Bollen and Ozinga 2013). In this sense, the VPA process includes an explicit effort to stimulate sector reform, including legal reform and in some cases formalization of informal access and trade.

Thus, the process of negotiating a VPA was designed to include support to improving forest governance through a revision of forest-related laws and regulations in partner countries, as part of a broader set of measures to implement forest governance reform and address corruption. Several authors have argued that legal review should also take customary laws in partner countries into consideration (e.g. Greenpeace et al. 2005), as well as domestic and regional timber markets (e.g. Cerutti and Lescuyer 2011). While legal reforms have been implemented or are underway in several countries, their rate of success cannot yet be assessed. Nonetheless, a recent assessment of signed VPAs indicates that customary laws were excluded from legal reviews in all VPA partner countries. On the other hand, of the six VPAs concluded to date, five of them (Ghana, ROC, Cameroon, Liberia and Indonesia) cover the domestic market, while the remaining one (CAR) intends to implement reforms to incorporate formalization of the domestic market after starting the licensing of existing timber operations producing (formally) for the international market (Bollen and Ozinga 2013).

The inclusion of domestic markets in VPAs without a review of customary laws and informal norms,³ as well as the functioning of informal domestic timber harvesting and markets in general, is a potential shortcoming of the VPA process. There is ample evidence that the EC is aware of this shortcoming: a recent EC report states that “[a]lthough most of the VPAs signed to date will apply reforms to all markets, domestic markets, especially informal domestic markets, present a particular challenge” (EC 2012). The report also makes clear that the EC is concerned about the potential effects of enforcement of laws that do not adequately protect the interests of the rural poor, including small-scale and informal timber producers, as evidenced by the following statements:

“When the Action Plan was adopted some concern was expressed that an emphasis on law enforcement could prejudice the interests of poor people. There was evidence that regulations often discriminate against small producers and that law enforcement targets them rather than the owners and financiers of illegal logging companies who have the money and connections to evade the law. EU support has been provided to timber producing countries to try and avoid unfair enforcement of inappropriate laws” (EC 2012);

and

³ Customary and informal are not synonymous, however, they have been conflated in the language used in reference to the legal reviews that need to be done as part of the VPA process. Although we recognize that customary systems of land and resource ownership, access, and trade can be highly formalized, at this point in our analysis we also recognize that policy makers involved in designing the EU’s FLEGT policy and its instruments do not necessarily make the distinction. For that reason, we allow some flexibility in our own use of the terminology for the time being.

“For many families, forest products contribute as much as a quarter of household income. They often, however, do not have secure rights to use the forests on which they depend. They are constrained by burdensome licensing and planning requirements and have no recourse should their land be appropriated” (EC 2012).

It is significant that the EC, in designing and implementing a trade regime that requires legal review and reform in partner countries, recognizes the potential of enforcement to negatively affect small producers and families dependent on forests. Without secure rights to land and resources, implementation of the legal frameworks regulating the latter’s use, vulnerable people risk losing important sources of income. It is therefore logical to consider, in reviewing national legislation, including customary law and practice and to propose that policy makers initiate a new national discussion on the future of new national legal frameworks that considers the latter, their potential impacts on the long-term strategic objectives of the State, and the trade-offs that will have to be considered for the formalization of such customary systems as a means to prevent the eventual dispossession or exclusion of forest communities from the timber sector or from forests altogether. Such considerations may also facilitate the adoption of new regulations and practices derived from the EC trade regime, limit local resistance to them, and find meaningful ways to recognize and strengthen local governance regimes. In this context, formalization is a process that occurs as existing practices and norms are incorporated, as they are or in an altered form, into codified legal systems.

FERN’s suggestion that local communities’ rights could be strengthened by formalizing customary or informal practices is grounded in a long history of formalizations, some of which have been used to reduce or prevent conflict. While some of these formalizations were successful, others have had perverse effects. The process of formalization of customary laws, rights, and practices of access and trade in natural resources is not a straightforward endeavor, and comes with a certain number of risks. These risks range from failure or reversal of the formalization process itself to a number of unintended negative effects. Among these are exclusion of local people (including women, minorities and the poor) from resource access, decision making, benefit flows; criminalization of vulnerable actors; and accrual of power and capital by certain interest groups and elites at the expense of others (See, e.g. Meinzen-Dick and Mwangi 2009; Toulmin 2009; Rocheleau and Edmunds 1997; FAO 2002). In legally pluralistic systems, formalizing land rights can cut off the poorest and most marginalized groups in society from important resources for their livelihoods and/or security. Formalizing a customary system can render permanent a temporary or periodic practice or right if policy makers fail to understand the dynamic nature of a system (e.g. Chappelle 1978). Finally, a formalization can simply fail to change behavior.

In order to shed light on the potential effects of formalization of domestic timber access and trade in the context of FLEGT’s VPA process, we looked to other resource sectors where significant formalization efforts have been undertaken in recent years. The sectoral reviews cover the histories of formalization processes in the non-timber forest sector in Southern Africa (Wynberg *et al.* 2012), in Brazilian Amazonian fisheries (McGrath 2012), and in the artisanal mining sector in DRC and related trade with Rwanda (IPIS 2012). In addition, two general overviews of formalization of land tenure and resource access, respectively, were prepared by scholars working on those issues (Peluso *et al.* 2012; Spiegel 2012). The following sections provide a brief overview of these reviews, a comparative assessment of factors driving formalization in different sectors and outcomes, and a

series of issues to consider in the FLEGT-VPA process. We begin in the next section with an overview of the concept of formalization as a process.

1.2. Formalization – Definition and context

1.2.1. The “informal sector”

In order to discuss formalization in the context of FLEGT-VPAs, it is useful to first place the term in a context that is appropriate to the field of the current study. This study was motivated by an effort to understand a process addressing illegality in the international timber trade, mainly by preventing flows of timber not harvested and traded in accordance with established national forestry norms or international certification standards. To this end, it is useful to seek lessons from economic sectors including other natural resources as well as land. The formalization we are interested in, therefore, involves either a transformation of informal practices by incorporating them into a formal system, or an elimination of those practices in favor of practices that are already accepted as, in some way, formal. Formalization is achieved through the application of rules governing access to and trading of land and resources, taxation, and instruments of verification and enforcement of those rules.

Implicitly, informal resource access and trade occurs within what has been termed the “informal sector.” Along with access and trade, we consider both informal labor and informal land tenure (which can include resource tenure) as key components of the informal sector, though they have been treated differently and with different outcomes. UK anthropologist Keith Hart is credited with introducing the concept in the early 1970s in the context of unregistered urban labor in Ghana, and the term was initially popularized by the International Labor Organization to refer to small-scale activities characterized by low technology, low productivity, and lower incomes than those of the formal sector (Rakowski 1994; Yusuff 2011). Although often equated with illegality, informal activities are not necessarily the same as the “black market” (See Tokman 2007). Informal economies can arise and persist in an environment of excessively burdensome taxes and regulations imposed by governments that lack the capacity to enforce compliance (Loayza, 1997 in Sepulveda 2007). Informal economic activity is often considered to be a strategy to avoid state taxes or regulation and is therefore prosecuted, punished and eradicated. This occurs even when the activity is in reality a legitimate subsistence strategy of the economically oppressed (Sepulveda 2007). Borderlands have been particularly conducive to the rise of informal economies as crossing borders may facilitate tax, law, and regulation evasion, as well as escaping punishments for breached laws or unpaid taxes (Staudt 1998, 2001; Pahimi 2012). In development policy, attitudes towards informal labor differ greatly, ranging from the perception that informal jobs should be regulated if not eliminated, to the view that vulnerable informal workers should receive social assistance, or should be protected from government regulation that would interfere with their entrepreneurial activities (Chen 2007).

Land tenure is relevant to ownership of all other land-based natural resources as well as to inland fisheries accessible only via land. Peluso et al. (2012) adopt the following definition of formalization of land tenure: “ the recognition and inscription by the state of rights and conditions of access within specific boundaries” (Hall *et al.* 2011). Spiegel (2012), meanwhile, observes an association between advocacy of formalization of natural resource sectors with the promotion of privatization and

“market-friendly” rules that “differentiate between legitimate and illegitimate activity” and bring the latter into the officially regulated sector. Formalizing informal land tenure has been addressed especially as a means to bring marginalized economic actors into the national economy, whereby they are supposed to benefit from legitimate ownership (which, for example, is a basis for obtaining credit) while contributing to the economic development of the nation state. This school of thought originated with the theory of Hernando de Soto, a Peruvian economist, who argued that lack of formal rights limited national economic growth and so promoted widespread titling of informal landholdings (De Soto 2000; 2002). Despite the popularity of De Soto’s perspective among development banks and international aid donors, many analyses of formalization’s capacity to reduce poverty have shown that it often does not achieve its stated goals (see, e.g., Bues 2011) and that De Soto takes for granted capitalism as “the only game in town” (Benjaminsen 2002). Empirical research has shown that formalization can deprive smallholders of their land and resources through willing transfer, seizure, or forced sale (e.g., Bruce *et al.* 2007, Borrás 2008, Borrás and Franco 2011, Li 2011). Critics of formalization argue that this process can provide rent-seeking opportunities for state and non-state actors (Deininger 2011, de Schutter 2011, Hall *et al.* 2011). Bromley (2008) perhaps puts it most starkly, saying “[t]he eager acceptance of these curious prescriptions [i.e. formalization of property rights] is evidence of the intellectual emptiness at the core of the development discourse.” But why is formalization so prescribed?

1.2.2. Rationales for formalization

Despite formalizations’ potential shortcomings, in the context of natural resource management and sustainable development, the existence of informal sector has often been perceived as a challenge. At the most general level, to those who believe the State is the agent that will accomplish sustainable development through policy-making and regulation, the informal sector is a hindrance because it is “unknown”, “invisible”, and “not regulated” (Briassoulis 1999). In the context of national policy as well as international trade regimes⁴, (of which FLEGT is arguably one, with the VPA as its primary instrument), formalization is commonly prescribed as a solution to problems associated with informal economic activities undertaken by actors and communities, including environmentally or ecologically unsustainable practices, biodiversity loss, untaxed or under-taxed trade in land and resources, corruption, inequitable access and sharing of resources and benefits aggravating poverty, conflicts arising from encroachment on land and resources by outsiders or newcomers, and financing of armed conflict. Extralegal or, more commonly, illegal logging, is said to reduce international wood prices and therefore can contribute to over extraction (Seneca Creek Associates and Wood Resources International 2004, Contreras-Hermosilla 2011). Formalization is a key component of effective state governance, because it makes land, people, and their activities

⁴ “Regimes” have been defined as “social institutions that influence the behavior of states and their subjects [consisting] of informal and formalized principles and norms, as well as specific rules, procedures and programs...unwritten understandings and relationships, as well as the formal legal agreements, that influence how states and individuals behave in any given issue area” (Levy et al. 1995).

legible, taxable, and governable and also provide the grounds for national and development policies (Briassoulis 1999; Meinzen-Dick and Mwangi 2009).

In forestry, formalization has been implemented to promote poverty alleviation and to improved and secure access of local communities to resources (per de Soto 2002), e.g. in Indonesia during the beginning of national reformation in 1998 (Carson and Obidzinski 2002). It has also been promoted as a macroeconomic tool, with the intention of increasing State income from taxes and thereby reducing dependency on foreign aid (de Soto 2000 in Siegel and Veiga 2009). Formalization of artisanal mining has been undertaken for these reasons as well as reduction of pollution and health and safety hazards to workers (including children) and recognition of the social and economic rights of miners (Siegel and Viega 2009; Putzel and Kabuyaya 2011). On top of these reasons, other major priorities included the interruption of financial flows to armed groups involved in violent conflict while improving the state's ability to collect taxes (IPIS 2013).

1.2.3. Context of formalization

Formalization occurs against a backdrop of socio-political as well as environmental complexities that can affect processes of policy formulation and eventually outcomes. The cases presented in our study describe various constellations of land and resource tenure, diverse economic interests, historical and residual patterns of access, rights, and ownership (Peluso *et al.*'s 2012 "sedimentation"), intersecting legal and customary systems (all cases), multi-scalar governance (IPIS 2012), social movements (McGrath 2012) and processes of decentralization and recentralization of authority (Spiegel 2012). Property rights and land tenure may be overlapping, and the authority to determine ownership of land and specific resources can reside with governance bodies at different scales and with different sectoral mandates. Social and environmental movements often play a role in supporting or countering specific elements of formalization processes, depending on their goals. Social upheaval, including conflict and associated large migrations of people, can alter the priorities of actors involved in policy making as well as other interest groups, including civil society, and affect the capacity and will to enforce a particular law given trade-offs (e.g. between social and environmental concerns).

In all processes of resource access, land tenure is inevitably one of the key elements of the context in which a process of change from informal to formal is implemented. It can therefore not be overlooked during the design and negotiation of revised resource access regulation, and may be a determinant factor in whether formalization of access and trade is effective and enforceable, whether it was feasible in the first place, and whether it is equitable. In the case of FLEGT, land tenure is likely to be particularly important because of the predominance of the concession model in national forestry laws, which requires assigning large areas of land (e.g. 50,000 ha in Peru – 200,000 ha in Cameroon) to logging companies.

Another determinant factor is power, both economic and political, of stakeholders who will be affected by the formalization of the process: while powerful actors may have the ability to enable or disable the process, and indeed appropriate it to their advantage, the marginalization of actor groups may render a particular process illegitimate and ineffective (see, e.g. Gellert 2005). If new

rules render the activity too costly for smaller or poorer actors to engage in or if the rules introduce greater inequity, they might be unenforceable. Alternatively, the rules might only be enforceable by criminalizing offenders, which might be considered to be morally acceptable in some cases of greed-based offenses but not need-based access to resources.⁵

The nature of what is being formalized matters greatly to how this process of formalization can and does take place, how it is enforced, and effective it is. For example, processes for formalizing land—immovable, often historically contested, and containing many natural resources and ecosystem services—are very different from processes for formalizing resource access or trade. The rights, meanings, materiality, and practical uses of these things differ significantly making the factors to be considered in the formalization of each quite different as well.

1.2.4. The practice of formalization

In practice, formalization involves creating a state legislative framework and processes of registering, organizing and tracking informal activities (Siegel and Viegas 2009). Formalization also involves legalizing informal rights (to property, thereby securing the rights of current landholders, to process, to trade) and sometimes can improve access to credit and markets in order to make the activity viable and profitable. According to de Soto (2002) the process includes a number of steps such as:

- “Discovering” customary laws and understanding the modalities, efficacy and strength of existing local conventions
- Incorporating norms from informal or local contexts into new “universal” (i.e. broader and/or higher-scale and formal) contexts
- Consultation with “legal and extralegal leaders” to hybridize customary law with elite laws to create a unified formal code
- Codify extralegal laws into temporary formal statutes that can be assessed against existing formal law

The preceding concepts, proposing incorporation of existing customs and norms through processes including consultation and harmonization among systems of practice are derived from more recent post-colonial thinking, but often maintain practices that have been tried repeatedly in the past (see Box 1). In colonial times, formalization was prevalent throughout the European colonies as territorial boundaries were drawn up and rules governing access to land and resources were imposed on imperial holdings (Peluso and Vandergeest 2001; Daniels et al. 2011). Colonial law making ranged from the application of entirely new sets of rules, often based on European legal systems and even incorporating mechanisms designed by the Romans (often to expropriate conquered territory), to interpretation and recognition of local custom, or some combination of the two approaches (Home 2011). Formalization was carried out to define the rights of the colonizing power to own land and to acquire and trade resources, while generally delimiting (and often severely limiting) the rights of local subject groups that were to be protected (de Moor and Rothermand 1994). To preserve areas

⁵ See Obidzinski 2009: “‘Need-based’ forest crime is driven by poverty, and involves small-scale actors seeking to meet basic needs. ‘Greed-based’ forest crime is driven by profit and is highly organized, involving large amounts of money and powerful actors.”

known to contain significant resources, such as wild game, timber and minerals, colonial powers set aside natural reserves and parks. With evolving interests in cultural preservation or to prevent social conflict, and eventually in some cases to satisfy social justice, individual and collective rights to property and resources were established for local or indigenous people (see, e.g. Brockington et al 2008). Towards this end, the identity of those people upon whom rights were to be bestowed would need to be defined and codified along with the nature and extent of their rights over land and to specific resources. This at times led to the granting of rights to one ethnic group perceived by the colonial authority to be the legitimate owner at the expense of others, resulting in a “racialization” of ownership and access to resources (Peluso and Vandergeest 2001). Further, groups with more acceptable (or governable) livelihood practices like sedentary agriculturalists were often favored in these processes over those with mobile livelihoods like pastoralists, swidden cultivators, and hunter-gatherers.

At the national level, including in post-colonial states, formalization of land and resource tenure has become a process of legal recognition of land and resource rights and incorporation of those rights in national legislation. In the case of customary law, it may involve creating formal recognition of a set of rules governing a particular group and its territory, requiring various degrees of codification of actual rules and/or the authoritative structures empowered to permit activities, adjudicate, enforce and apply penalties. Codification might include, for example, the requirement of land titles or concession permits to occupy or enter or extract resources from an area.

When controlled by communities at the local level, formalization of land and natural resource tenure can bring positive results such as the empowerment of marginalized ethnic groups and improved chances for cultural survival (Hoekema 2011). However, when brought about through interventions by external or elite actors for various economic and environmental reasons, clashes between customary, colonial and post-colonial regimes contribute to growing inequality and dispossession of the poor (Peluso et al. 2012; Moyo 2003). Peluso and Vandergeest (2001) would argue that it is the creation of a forest law that defines some rights as “customary” vs legal and also redefines many pre-existing (but non-conforming) practices as illegalities that become “forest crime”. Additionally, Benjaminsen et al. (2006) estimate that formalization programs carried out in Africa during the colonial period and soon after independence “are largely seen as failures, with unanticipated results such as increased conflict, greater asset inequality, legal pluralism, and the manipulation of the process by an elite to its own advantage.”

Even without such major adverse effects, formalization can bring inefficacy and waste; interventions that redesign institutional and legal frameworks can produce overregulation and bureaucracy, which are time consuming and impose high financial cost to economic actors (loggers, miners, farmers, etc., whether individual or corporate). According to Deininger (2011), “[f]or local people to benefit from investments, but also for investors to enjoy a level of tenure security that encourages them to make the needed long-term investments, rights to land and associated natural resources need to be recognized, clearly defined on the ground, and enforceable at low cost.” In reality, new resource and land titling procedures are generally very costly and overly complex. That complexity can be

Box 1. Historical drivers of formalization

Formalization, particularly of land, is and has been influenced by national histories of land use, title, and control. As Peluso et al. (2012, 8) point out, internal national territories and land control practices are not static and are not the same across different nations. These site-specific histories influence contemporary laws, everyday practices, and institutional/individual memories (Sjaastad and Cousins 2009; Peluso et al. 2012). Colonial interventions in many of these countries were highly varied and produced many different outcomes—differing ambitions for colonial economies and development led to varying levels of investments in transport infrastructure, education programs, and development of markets whose legacies still exist today. Differing colonial ideas about territory, land use, and ‘native rights’ have persisted or been reacted to by independent governments and social movements. In many cases colonial notions of “the household,” vacant/unproductive land, or cultural difference were hardened into legal categories that marginalized certain parts of society and land uses while privileging others. In some cases, colonial methods of formalization and dispute mediation continue to be tools used by national state administrators to legitimate their power over land and people. Indeed, as Peluso et al. (2012, 20) put it, “land registration with state underwriting was meant to eliminate overlapping claims and facilitate the state's governance of land.” In cases where independent governments have followed in the footsteps of colonial regimes, the groups who colonizers favored (e.g. settled agriculturalists as opposed to migrants and pastoralists in Africa) are often the same groups who gained dominant political power at independence.

In other cases, independent national leaders have gained power over land and people by pitting their administrations in direct opposition to colonial legacies, pursuing avenues of socialism instead. In states that experienced socialist governance or influence (e.g. Tanzania, Vietnam, Cambodia, Ethiopia, and Indonesia) this ideology left indelible marks on land formalization. Ideas of equity, justice, and rightful land claims are influenced by socialist thought even if the country is no longer (or never became) socialist. Peluso et al. (2012) use the example of Indonesia, which allowed a socialist group to join the ranks of many other political parties in the nation, to show how such influences could help produce the limits on land holdings and land reform enshrined in its Basic Agrarian Law of 1960. In some cases, like Tanzania where forced ‘villagization’ practices were a part of socialist land formalization, people have become suspicious of land reforms, such as 1999 Land Act and Village Land Act, making their institution more difficult to integrate even after the socialist period has ended. As Daley (2005, 565) “tensions arising from the disjunctures between local processes of land commoditization and longstanding prior national land tenure policy are therefore likely to cause continuing problems and insecurities.” The repeated land redistribution programs of the Derg Regime in Ethiopia have been shown to have similar effects—despite land formalization programs set in place farmers still expect to lose land (Ali et al. 2007, 8).

Even in states that were not formally colonized (e.g. Siam/Thailand) or colonized for an extremely brief period (e.g. Ethiopia), European-style land formalization took place well before WWII. These states, surrounded by those which were colonized by European powers, recognized the utility of formalized territories and rights in land. With these long histories come the baggage of long-standing and legalized categories of land, people and livelihoods that are also found in countries with colonial histories. Thus, in countries that had little or no colonial history, those that continued colonial traditions after independence, as well as in those that attempted to completely erase colonial legacies, the baggage of long-standing, legalized and often dualistic categories of land, people, and livelihoods still remain (Mamdani 1996). For example, in Ethiopia, a country that sought to modernize itself by establishing a modern civil code (Mamdani 1996, 132), those with certain livelihood practices (e.g. sedentary agriculturalists) are privileged in land formalization efforts over those with different livelihoods (e.g. pastoralists), building on a legacy that has persisted since the 18th and century (Collins 2006; Makki and Geisler 2011).

measured, for example, in terms of the number of steps and time involved in a registration process, for example (Lagos 1995; Firmin-Sellers and Sellers 1999; Nugroho et al. 2013), and represent a barrier to adoption of or compliance to a formal process. Excessive and costly regulations that particularly interfere with resource ownership can override and weaken effective traditional practices and encourage illegal activity (Wynberg et al. 2013). Such regulations may also benefit the elite, educated and well-connected people in the country and often serve to further disenfranchise the most vulnerable parts of the population (Meinzen-Dick and Mwangi 2009). This can make it possible for states to sell off or rent out for resource extraction large portions of their land holdings, often designated as unoccupied⁶. In an example from Porto de Moz, Brazil, Pulhin et al. (2010) detail how excessive conservation-oriented regulations on land use and forest management resulted in non-compliance and illegal timber harvesting by local communities in new extractive reserves. Global institutions such as the EU and agreements (e.g. the CBD) as well as powerful foreign states and private companies have also become a driving force of formalization as they seek to apply uniform environmental and social norms to which countries must adapt and conform. In signing onto bilateral or multilateral agreements governing trade, conservation, carbon emissions, etc. countries enter a process of reviewing national laws, which often need to be conceived or revised, and supported by new mechanisms of enforcement and verification.⁷

2. Comparative analysis of sector cases

The sector-specific cases comprising this study shed light on a number of factors which are likely to be critical to the decision of whether to formalize access and trade in resources, what such a process might entail, and what potential impediments or adverse outcomes might be expected. The three natural resources sectors – fisheries, mining, and NTFPs –selected for comparison of formalization processes represent a range of contexts, drivers, and outcomes of such processes. This section is organized in those terms, with a view to assessing the circumstances in which formalization was called for, the sources of power that supported the process, and the results in terms of efficacy, durability, sustainability, and adverse effects.

2.1. Contextual comparison of cases

The locations of the sector-specific cases selected for this study are southern Africa (mainly South Africa, Namibia, and Zimbabwe), the Great Lakes Region of eastern central Africa (DRC and Rwanda), and the floodplain ecosystems of Pará and Amazonas States in the lower Amazon region of Brazil. The crosscutting cases include examples from Indonesia, and mainland Southeast Asia, mainly relevant to land and mineral resource extraction. Southern Africa is a “hub of NTFP commercialization activities” (Wynberg 2012) in which increasing regional and global demand for a number of plant products has resulted in ecological concerns and issues of rights ranging from

⁶ to, e.g. foreign multinationals, in which case the state is facilitating “land grabs.”

⁷ It is important to note that such regulatory adaptations to higher-level international or bilateral processes are likely to fail, as was the case with the Peru-US Free Trade Agreement (see, e.g. Putzel 2009 and EIA 2013).

tenure to intellectual property. The Great Lakes Region is rich in mineral ores from which are derived tin, tantalum, and tungsten (the 3Ts), which are essential in the electronics and telecommunications industries as well as heavy industries. The informal or “artisanal” extraction and cross-border trade of these minerals, has been a source of on-going conflict and human rights abuses in the region. Brazil’s lower Amazon floodplain fisheries have experienced conflicts over access to fish – a common pool resource – as growth of national and international markets have stimulated increased fishing by outside commercial fishers bringing technological innovations allowing larger catches and larger storage capacity for transport to more distant markets. In all three sector-specific cases, the resource is a key source of income to local people, as is timber in VPA countries.

The socio-political context in which formalization efforts have been undertaken in the three regions to govern access and trade in the respective resources varies greatly. For example, in southern Africa the existence or re-emergence of traditional and customary rights systems associated with particular ethnic groups interacts with national policies that are strongly influenced by global indigenous movements and environmental treaties. Complex tenure and resource access arrangements, which differ from site to site and according to product, can be confused by decentralization policies and devolution of natural resource management to the local level on one hand, and sometimes by the subsequent re-centralization of political control as well (Spiegel 2012; Ribot et al. 2006). This results in lack of clarity around the governance of NTFP access and trade.

In the Great Lakes region, recovery from years of war and stabilization of the region to prevent further conflict has resulted in major interventions by the international peacekeeping community and from regional governments. Legislation on access and trade in minerals is relatively clear, but efforts to stabilize access to resources is counteracted by movements to perpetuate conflict, in part motivated by economic interests in conflict minerals. Long-term conflict has caused waves of migration in eastern DRC, as it is happening in several VPA countries (from CAR to Cameroon and/or Congo) from the eastern border westward, pushing back the forest boundary (Mayaux et al. 2005). This impedes governmental efforts to delimit ownership (and claim ownership) over mineral resources. As people are displaced, economic need provides an incentive to engage in small-scale mining, either individually or as casual labor to organized artisanal mining operations, and insecurity prevents concerted efforts by national or international forces to secure mines.

In Brazil, by contrast, regional social and labor movements in the 20th century brought increased social cohesion and community efforts around natural resource access and management. While not isolated from institutions operating on multiple scales (including, notably, the Catholic Church and environmental groups incorporating ecologists and other scientists), these local-level movements at times demanded government support in developing and enforcing resource access regimes. Efforts to define and enforce fishery management regimes has relied on developing a set of rules over fishing methods and access to inland fisheries, especially lakes (a process which will have to happen in VPA countries if chainsaw milling is to be included in the legal framework, i.e. a “set of rules” over who can harvest what timber and where). In an ecologically dynamic riverine environment with different types of tenure, including large-scale ranches and agro-extractive settlements with individual and collective property rights (as is the case where large scale forest management units, council, community forests coexist in several VPA countries), it is challenging to design and enforce a coherent policy.

Finally, in the various contexts of the cases we cover here, there are large differences in the relative power of the actor groups involved in imposing, requesting or experiencing formalization, as is the case in VPA countries. In Brazil, as mentioned in the preceding paragraph, social movements reinforced by powerful institutions were more able to affect government behavior than if they had acted alone. In Southern Africa, it can be argued that different sources of power came to bear on different aspects of diverse formalization efforts depending on the interests behind the introduction of a new policy or law; these ranged from indigenous movements where the protection of the intellectual or cultural property of a particular group was central to the formalization activity to conservation NGOs and government agencies to whom protection of biodiversity was the main force behind efforts to change. In DRC, there is the sense that the economic and livelihoods interests of local people are lost in the battle between national governments, global institutions (e.g. peacebuilding, trade) and rebel militias to exercise ownership over valuable natural resources. In all cases of formalization it is important to understand who is best able to assert his/her claims based on political, economic, social, and cultural power and consider how and in what ways to incorporate and represent the claims of those who are less powerful. It is also critical to understand the ecological context of the resources and processes being formalized.

2.2. Drivers of formalization

The sources of power driving policy change upon which formalization efforts are based vary greatly. In the very different contexts described above, different combinations of drivers have operated on multiple political scales to bring about formalization processes. We examine drivers as a combination of “motivating conditions”, such as negative environmental effects or human rights concerns surrounding informal activities (Table 1.), and “institutional power”, such as international agreements and civil society movements. The different drivers are compared in Table 2.

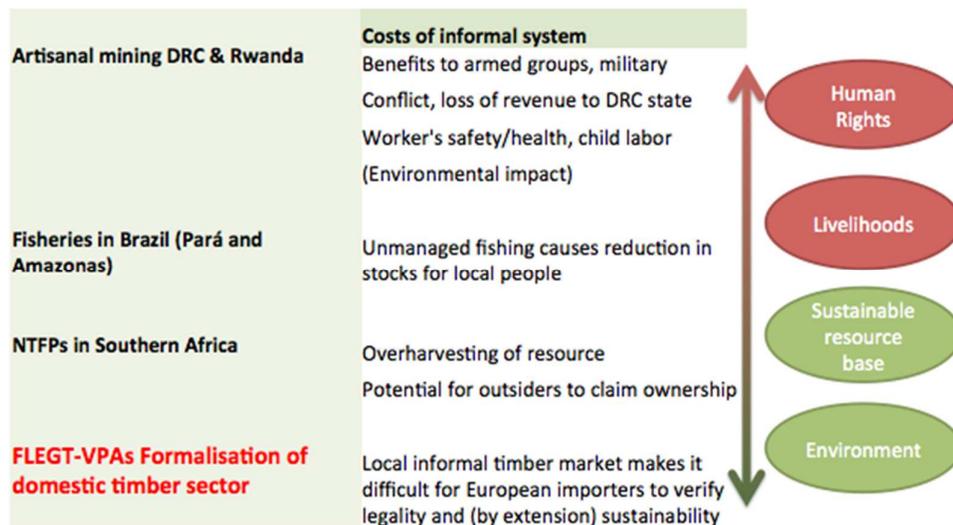


Table 1. Motivating conditions for formalization. To varying degrees, the sectoral cases selected for comparison in this study represent formalization processes motivated by human rights concerns (e.g. associated with violent conflict in the Democratic Republic of Congo); human livelihoods (all cases); maintenance of a sustainable resource base and environmental conservation (such as in management and protection of fisheries and non-timber forest product base). The proposed FLEGT-VPA process of formalizing

domestic timber is among the processes explicitly motivated by environmental concerns, though concern for social outcomes is also explicit.

The degree to which the “motivating conditions” for formalization affect stakeholder groups with influence over the outcome is likely to be a key factor in the success or failure of a formalization effort. “Institutional power” therefore might be expended to further formalization, but bottom-up stakeholder participation and support is likely to be a key factor affecting the legitimacy, effectiveness, and degree of permanence of a formal regime. This section describes those drivers by region and sector, and attempts to identify the relevance of each case to the FLEGT-VPA process.

	NTFPs Southern Africa	Fisheries Brazil	Conflict minerals Great Lakes
Motivating conditions (Rationale and demand)	<ul style="list-style-type: none"> • over-exploitation of the resource • equitable benefit sharing • revenue generation for the State 	<ul style="list-style-type: none"> • fisheries conflicts – Access by outsiders • technological changes and increased extraction 	<ul style="list-style-type: none"> • financing of armed groups • human rights abuses • health risks & use of child labor • lost tax revenues
Institutional Power (Driving Institutions and Interests)	<ul style="list-style-type: none"> • Convention on Biodiversity (CBD) • Convention on International Trade in Endangered Species (CITES) • National institutions 	<ul style="list-style-type: none"> • community-based fisher and smallholder movements • Catholic church • Locally-based NGOs 	<ul style="list-style-type: none"> • UN panel & peacekeeping • Int’l conference Great Lakes • Dodd-Frank act • Sector specific bodies • National institutions

Table 2. Drivers of formalization in three sectoral cases. Comparison of the motivating conditions and institutional power comprising drivers of formalization processes.

2.2.1. Sector case: NTFPs in southern Africa

Motivating conditions

According to the report by Wynberg *et al.* (2012), the primary concerns motivating formalization efforts in the NTFP sector in southern Africa are mainly risks of over-exploitation of the resource base and concern for equitable benefit sharing. These concerns are shared in the case of timber in the VPA process, focusing on sustainable forest management and livelihoods implications. In some cases, revenue generation for the state also motivates formalization efforts in the southern Africa case which also mirrors the interests of producer countries participating in the EU’s proposed restructuring of their timber sectors.

Of the NTFPs covered in the study, most are wild harvested⁸ from open-access areas according to a combination of customary rules of access and a growing range of official regulations and permits designated by local, regional, or national state agencies. In the case of the two tree species included in the southern Africa NTFP study, controlling the level of debarking, felling, and fruit collection are key to protecting the resource base. In the case of baobab in Zimbabwe, excessive debarking for handicrafts has been exacerbated by the economic crisis, leading to increased demand. Further, land scarcity arising from migrations of former commercial farm workers is an obstacle to sustainable management and enrichment of the resource base through planting of new trees (Wynberg et al. 2012). In South Africa, in-migrations of refugees and erosion of the role of traditional authorities has (at least in the Bushbuckridge study site) resulted in conflicting jurisdiction over the communal lands from which marula (*Sclerocarya birrea*) fruit are harvested, threatening traditional sustainable management, and cutting and debarking of trees despite their protected status.

Clarification of rules of access and harvest rights in an evolving system of private versus communal tenure is also a motivating condition for formalization of access to the NTFPs covered in the Wynberg et al. study. In Zimbabwe, for example, land reform has resulted in the conversion of privately owned areas with baobab resources to communal ownership, resulting in overexploitation in some areas. Despite these findings, if formalization of the timber sector in VPA countries involves re-engineering of access and harvest rights and potential privatization of forest land and resources, there is the potential for extremely negative outcomes for local people. The reasons for this are especially well elaborated in the Peluso (2012) case: privatization of property can engender exclusion of local people and rapid alienation of land formerly held or accessed by communities in favor of national elites (including customary authorities) or international business interests. And as highlighted by Meinzen-Dick and Mwangi (2009), since rights to access and harvest resources often belong to a complex “web of interests” changing the boundaries of access to a location can differentially affect different user groups, including women, youth, seasonal users, and ethnically different groups.

In the case of *Hoodia* spp. and *Pelargonium sidoides*, both medicinal plants with strong international demand with a history of exploitation in open access, benefit sharing with local communities has been a matter of concern. This is also the case with timber produced in VPA countries with parallel benefit distribution schemes associated with formal forestry taxes on one hand vs. the distribution of money in rural economies through informal harvesting and selling of trees. In addition, particularly in the case of *Hoodia*, protection of intellectual property of traditional knowledge and ownership of genetic resources of local and indigenous people has been challenging. The natural distribution of the species spans the borders of three countries (South Africa, Namibia, and Botswana) and exists both within and outside the communal areas occupied by the San ethnic group. Differences in approaches to management of the resource between countries, provinces, and different authorities, as well as the innate transportability of these light materials, has led to illegal harvesting, smuggling, and exports with falsified permits.

⁸ There are some exceptions to wild harvesting. In Namibia, Botswana and South Africa, a moratorium on wild harvesting of *Hoodia* has resulted in more cultivation.

Institutional power

A wide range of institutions are involved in regulating access and trade in NTFPs in southern Africa, including customary authorities and rules (with or without formal recognition), national laws governing land and resource tenure and benefit sharing, regulations on harvest and trade pertaining to particular species and tax laws (Figure 3). According to Wynberg et al., global agreements such as the Convention on Biodiversity (CBD) and the Convention on International Trade in Endangered Species have provided momentum from which many state-level policy changes have arisen. If successful, FLEGT and the VPA process could also engender such a response from partner countries.

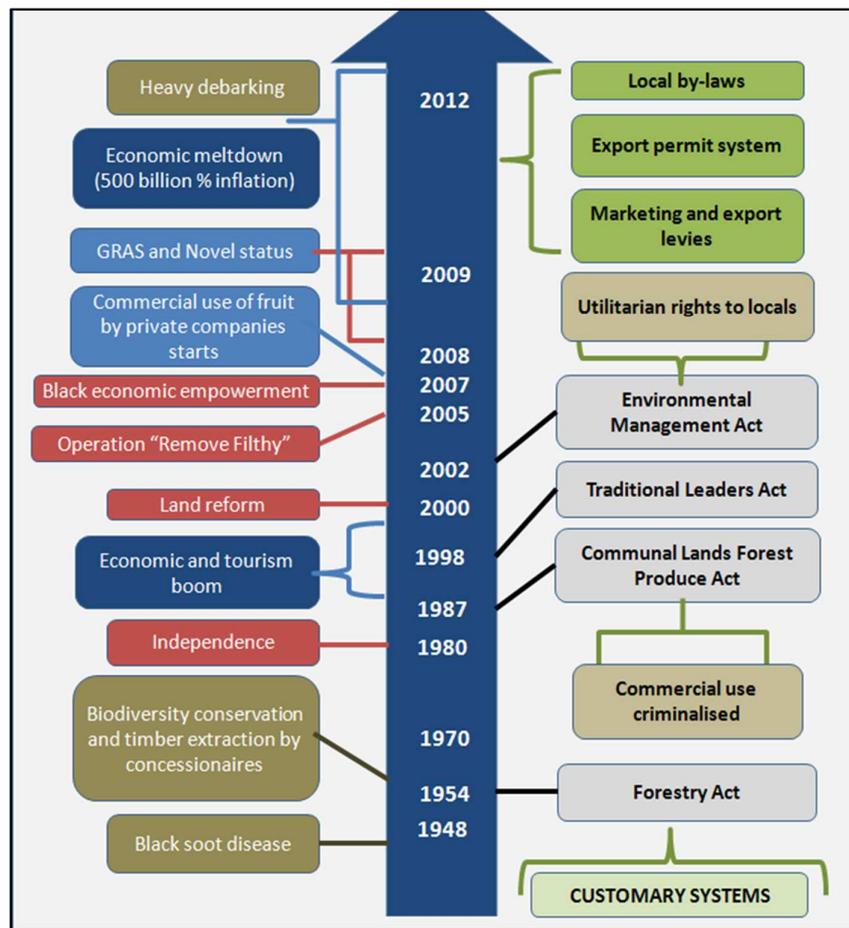


Figure 3. The evolution of the many drivers and instruments of formalization in the baobab industry in Zimbabwe. For each NTFP case in southern Africa, a different set of instruments and drivers applies (Wynberg et al. 2012).

The 1992 CBD in particular, to which all southern African nations are signatories, with its provisions for equitable access and benefit sharing (ABS) and free prior informed consent (FPIC), has been an important driver of regulation of trade – initially largely of “genetic resources” associated with traditional knowledge, but increasingly encompasses more generally “biological resources” including plant material. It is important to note here that the CBD process and the FLEGT-VPA process are not comparable, in the sense that the CBD was a process in which states negotiated a convention and its

wording on equal terms, and in which global stakeholders including advocates of local and indigenous rights were present to put pressure on their representatives. Conversely, the FLEGT-VPA process has been primarily conceived by the EU and subsequently negotiated bilaterally with partner countries, with some processes of consultation with interested parties including industry, local and indigenous rights groups, and other stakeholders. The CBD offers insight on how this initially top down approach could be complimented by more participatory interventions.

At the national level, the Wynberg et al. (2012) study describes a broad array of interrelated and sometimes contradictory laws and regulations which can broadly be classified as efforts to formalize traditional authority over land and resources, to institute conservation from the landscape-level to the species level, to promote sustainable resource use and benefit sharing, and to derive rent in the form of taxes on volumes of NTFPs entering the market – all of which are important drivers of formalization efforts. In Zimbabwe, for example, economic crisis was an incentive to improve the capacity of the government to secure revenues through taxation of the trade in baobab products. Similarly in South Africa and neighboring countries, increased government involvement in regulation and taxation was spurred by the high global demand for valuable species such as *Hoodia* and *Pelargonium*.

A number of specific mechanisms will be described in more detail below, with attention to their efficacy and shortcomings.

2.2.2. 3Ts in the DRC and Rwanda

Motivating conditions

Global market instability, the Congo wars, and state failure in the 1990s brought about a collapse of industrial mining in the eastern DRC, causing an explosion of “artisanal” mining activities linked to world markets through largely unregulated and unrecorded exports through neighboring countries. Artisanal mining is the term used in Central Africa to describe mining by individuals, generally in informal or extralegal circumstances. This proliferation of informal mining is comparable to the boom in chainsaw timber milling that occurred in Central Africa from the 1990s, although the latter was more for domestic and regional than for global markets (Cerutti et al. 2013). In the case of mining, illegal extraction and trade have been linked to several negative outcomes. First, the financing of armed groups and the perpetuation of insecurity in the region, and the national government of the DRC has been largely unable to gain control of or even adequately monitor the sector. Second, in addition to playing a role in continued armed conflict, unregulated artisanal mining is associated with a number of health risks as well as abusive use of child labor. Finally, the government at all levels loses tax revenues along the entire value chain from extraction to export, as is also the case with informal timber.

The regional political dimensions of the illicit cross-border trade in artisanally-produced minerals have been severe. Rwanda and Uganda were accused by the DRC of maintaining their interests in the DRC’s mineral resources by supporting a rebel movement in the eastern provinces. Although the former countries insisted that their involvement was security related, it cannot be denied that the illegal trade has played an important role in prolonging the war and continues to bring insecurity to the area.

Institutional power

In 2003, a UN Group of Experts issued a statement identifying illegal artisanal mining as a source of funding for groups “involved in perpetuating conflict” in the DRC. In the following years, a number of institutional measures at the national, regional, and global scale were established by the regional governments and international institutions aimed at bringing order to the sector for the main purpose of reducing funding for armed groups (while increasing the ability of the State to capture rent from the sector). A number of the initiatives with significant institutional support are mentioned in this section; more discussion of the particular instruments of formalization will be provided in section 2.3. In general, the institutions and instruments developed for formalization of artisanal mining are likely the most comparable to those that might be effective in formalizing informal timber, especially as concerns the regulation of movements of material and trade across borders. However, even with a significant presence of governmental and international enforcement agencies, the informal mineral trade continues, which needs to be taken into account when it comes to enforcement of the formalization associated with VPAs in countries with conflict zones and porous borders such as the DRC.

In the DRC, artisanal mining had been legalized by a 2002 national mining code developed in collaboration with the World Bank. In 2003, a new set of Mining Regulations established a Service for Assistance and Organization of Artisanal and Small-Scale Mining (SAESSCAM). The role of this agency is to register artisanal miners, support the creation of cooperatives, and oversee taxation of the informal mining sector. In 2009, the DRC government launched the Trading Centers Initiative, aimed at creating a safe space for trade between miners and traders in the eastern DRC, with support from the International Organization for Migration and the United Nations. The World Bank together with the UK Department of international Development (DfID) continue to support efforts to govern artisanal mining through the national PROMINES program.

At the regional level, in 2004, the International Conference of the Great Lakes Region (ICGLR) and the Regional Certification Mechanism were established by the regional governments to address political instability among its 11 member states⁹. In the following several years, the ICGLR established a Pact on Security, Stability, and Development (2006) and a Regional Initiative on Natural Resources (2008) bringing a range of measures to formalize artisanal mining and address the illegal mineral trade in the region.

Since 2008, the German Federal Ministry for Economic Cooperation and Development (BMZ) has supported an effort by the German Federal Institute for Geosciences and Natural resources to implement the Certified Trading Chains program in partnership with local authorities in the DRC and Rwanda, with an aim to creating a verifiable legal supply chain of 3T minerals between the countries. At the global level, focused specifically on the tin industry, the UK-based International Tin Research Institute in 2009 established a traceability system to allow buyers to obtain information on production and trade of tin all along the supply chain from extraction to processing and international trade. These efforts of increasing traceability of supply are intended to reduce the potential for unpermitted actors potentially linked to armed groups to trade across international borders. They

⁹ Including Angola, Burundi, Central African Republic, Republic of Congo, Democratic Republic of Congo, Kenya, Uganda, Rwanda, Sudan, Tanzania and Zambia.

are comparable to traceability efforts linked to timber legality verification and/or certification (see, e.g. Romero et al. 2013).

In 2010 the United States passed the Dodd-Frank Wall Street Reform and Consumer Protection Act, a financial regulation instrument containing within its miscellaneous provisions a section aimed at requiring due diligence and disclosures by companies holding US securities regarding their use and trade in conflict minerals from the DRC. This instrument increases the liability of multinational companies producing and trading in 3T minerals and gold as well as associated products, including electronics.

2.2.3. Fisheries in Brazil

Motivating conditions

Formalization of fisheries in the states of Pará and Amazonas in Brazilian Amazonia was motivated largely by fisheries conflicts that climaxed in the 1980s. Starting in the 1960s, technological changes such as the increased availability of diesel engines, synthetic fishing nets, ice-making plants, and polystyrene foam-insulated ice chests had enabled commercial fishers to transport their catches to more distant markets. The government supported these innovations and also instituted development policies to bring Amazonian fish to markets in other parts of Brazil. With increased capacity to catch and store frozen fish for transport, compared to former local practices of fishing seasonally and storing dried fish for the off-season, fishing became a year-round activity for commercial fishers. This brought increased pressure on local fisheries and integration of fishing value chains by outsiders.

In this case, formalization efforts arose in response to a series of events that had severely compromised local control of resources, threatening livelihoods and increasing rates of extraction. If FLEGT-VPA spur a shift from small-scale local logging by making it very difficult for small-scale actors to participate in the market, this could favor larger-scale actors from other places (including foreign companies, such as European, Chinese and Southeast Asian timber companies) who have better access to capital. If the formalization provisions of VPAs are implemented, it is important to be aware that it may result in the acquisition of logging rights by larger actors employing equipment that permits a more effective removal of timber from areas where local people formerly benefited from small-scale low-tech logging.

Institutional power

In contrast to the FLEGT-VPA process, which derives its institutional power from the European Commission, the institutional power that led to formalization of Brazilian Amazonian fisheries was grounded in broader social movements supported by various organizations and agencies. These included the Forest People's and Lake Reserve Movements which arose in response to resource extractive industries that threatened the way of life of local communities, including the expansion of logging and ranching in the case of forest peoples and the modernization of commercial fisheries in the case of floodplain peoples. These movements eventually led to the reform of governmental policies, in part due to scientific support and mediation by non-governmental organizations. The process features numerous efforts to integrate fisher groups in collective organizations linked to

resource management as well as fiscal advantages. Currently, in the state of Pará for example, an effort by the Ministry of Fisheries and Aquaculture is underway to create a new entity called the “Integrated Center for Artisanal Fisheries” (CIPAR), which will help to collectivize fishers, provide technical and marketing support and oversee fishery management (Figure 4).

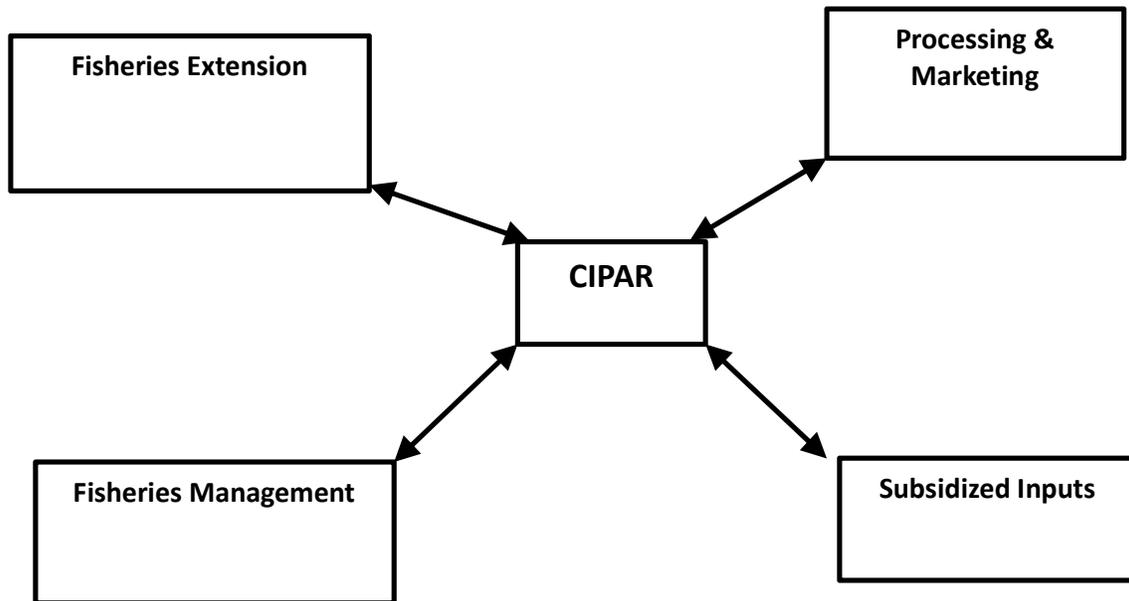


Figure 4. Structure of the proposed Integrated Center for Artisanal Fisheries to be constructed in Santarém, Pará State by the Ministry of Fisheries and Aquaculture. CIPAR is intended to promote the sustainable development of regional fisheries through three main activities: 1) building organizational of fishers and fisher organizations, 2) extension and technical assistance for managing fisheries and processing and marketing catch, 3) managing a facility to receive, process and distribute fish to local markets, and 4) sale of subsidized fuel and ice (McGrath 2012).

In contrast to top-down processes observed in other countries, including those covered in other case studies summarized in this report, the formalization of Brazilian inland fisheries was largely a bottom-up process motivated by community-based fisher and smallholder movements seeking greater control over local resources. These movements were supported at first by Catholic Church programs that led to rural labor movements such as the Forest People’s Movement in the 1980s and later by a number of NGOs, such as IPAM in the Lower Amazon and the Mamirauá institute in Tefé, who have provided scientific support to develop co-management systems for floodplain communities and fisher organizations (*colônias*). These NGOs have contributed to developing long-term strategies and sustainable management systems, and have assisted in negotiations and policy formulation with national and state-level government agencies.

There are also examples of external assistance to these efforts include funding from the German government, which supported the Brazilian Institute of Environment and Renewable Resources (IBAMA) to develop floodplain fisheries co-management policies and institutions in the 1990s, and from the World Wildlife Fund (WWF). The FLEGT-VPA process might benefit from a consideration of

how these local and external forces interacted to effectively manage renewable resources in a relatively equitable and sustainable fashion.

3. Instruments of formalization

Formalization is achieved through the application of rules governing access to and trading of resources, taxation, and instruments of verification and enforcement of those rules. Instruments governing access include, at the most fundamental level, various types of titles and certifications. These include titles legalizing land tenure and permits such as extraction permits, which typically rely on a national legal code, and local by-laws governing processes of application and conformity to standards of practice. In natural resource extraction, standards may include prior development of environmental and social impact assessments and mitigation plans, forest management plans, or may rely on general guidelines such as size limits on fish. It is often at points of trade along supply chains where evidence of compliance to provisions of legal access is required, which has led to the development of various mechanisms of verification and certification. In the following sections, some of the formalized mechanisms of access and trade – including all associated processes such as harvesting or extracting, processing, selling, taxation, verification and enforcement – are described.

3.1. Access

3.1.1. Land and resource tenure

Land ownership or use-rights, whether individual or communal, are fundamental in governing access to natural resources. The most common instrument used to determine the rights of an individual group to access land is a land title recorded with the appropriate governmental authority, such as a national land cadaster. The primary legal instrument governing land titles and other provisions such as communal indigenous territories is generally a national land code, which identifies the main mechanisms of titling, various forms of land ownership etc. This is surrounded by an array of related laws, policies and practices at various scales, forming a “bundle of rights,” an early 20th century concept (e.g. Hoyt 1918; Clark 1925; Demsetz 1967) or a “web of rights” (e.g. Meinzen-Dick and Mwangi 2009) used to describe the operating space in which people have the freedom to act in their benefit, circumscribed by a set of rights and duties enshrined in any number of legislative and customary instruments. These instruments delimit rights of access and withdrawal (use rights) and management, exclusion and alienation through sale, lease, gift or inheritance (decision rights) (Barry and Meinzen-Dick 2008; Pacheco et al. 2008).

Communal areas belonging to specific groups are often mapped and recorded with varying levels of specificity as to the members entitled to access (e.g. Bruce et al. 1995; Fingleton 1998; Deiniger and Feder 2009). In the case of communal lands, a traditional or customary authority at the local level may have particular systems for allotting rights to access, which may or may not be governed by a written code.

In many cases, land ownership does not extend to full or even partial ownership of the resources located within its boundaries. Many states reserve rights to timber and underground minerals. Thus, holders of land containing timber are often required to obtain separate permissions to extract it, and both timber and non-timber resources extracted from lands even where titles are clear generally cannot be widely traded without separate permissions governing transport. Resources within lands belonging to specific owners may also be open to extraction by others. For example, In the case of fisheries in Brazil, there are rules enforcing open access and an individual or communal owner of land containing a lake cannot prevent access to outsiders unless the lake is completely enclosed within the landholding.

Land ownership therefore, while a key factor determining the ability of individuals or groups to access a particular resource, is not always sufficient to exclude others from entering to acquire the resource. On lands occupied by communities – whether tenure is informal, customary or *de jure* – rights to extract timber or minerals can often be granted by authorities (from local to national, customary to legal/official) or national government to outside parties. On the other hand, within communally held lands, rights to specific resources can sometimes be allocated to individuals or families. For example, in Namibia, individual marula trees are tenured to private individuals by traditional authorities.

Over time, successive laws and policies on land and resource access may clarify (e.g. at a smaller political scale), supersede, or overlap with prior rules or rules that govern specific resource sectors. As such, the space within which individuals and communities can legally access land and resources may either broaden or narrow.

3.1.2. Permits for harvesting or extraction

Permitting systems whereby users apply for single-use or regular licenses to harvest or extract a specific product are often administered in the context of quotas on volumes extracted and restrictions pertaining to seasonality or ecological criteria (e.g. fish size limits, log diameter). Often they require a membership in a particular cooperative, association, or community that administers rights, or they may be centrally administered by a state, provincial or municipal level authority¹⁰. They may also require in-depth understanding of the biophysical context within which extraction is taking place, and the ecological attributes (e.g. regeneration/growth rates) of the species or materials being harvested. Certain species of timber are produced in natural ecological niches within highly managed agricultural landscapes and warrant being lightly regulated or entirely exempt from permitting processes (Erazo et al. 2013; Putzel et al. 2013). Other ecologically rare or threatened species or resources associated with potential social and environmental damages require stricter regulation.

¹⁰ In determining who has legitimate access rights to a resource or extractive area, a common result is also the exclusion of some existing actors and the marginalization of non-members.

Our case studies describe a range of permits administered at different governmental scales. In the case of mining in DRC, which is highly centralized (at least on paper) under the authority of the Ministry of Mines, most of the areas delineated as mining concessions are covered by exploration and exploitation permits held by private companies. However, the 2002 Mining Code formalizes access to artisanal miners albeit on a very small scale: 60 areas covering ca. 1500 km² have been set aside as artisanal mining zones where individuals can obtain a registration card upon joining a mining cooperative. That said, artisanal mining continues to occur outside these zones (Putzel and Kabuyaya 2011).

In Southern Africa, access permissions vary according to country and product. In Zimbabwe, for example, a Forestry Commission (FC) issues permits for bulk harvesting of baobab products. Following an inspection of the resource base by the FC which costs harvesters ca. \$20, permit holders are required to pay a harvesting fee to a local council. In South Africa, *Hoodia* harvesting initially followed a permitting system designed to conform to 2004 CITES non-detriment requirements, which was initially enforced in the Western Cape to verify the minimum size of plants harvested but not the total volume. Because of this, material from other areas such as the Northern Cape and Namibia where harvesting was banned entered the supply chain and was exported through the Western Cape, where permitted material exceeded the amount available in the province. To address this problem, the Northern Cape's harvest ban was lifted and a quota system was implemented, which came with additional provisions for management and cultivation of the resource.

In the case of Brazilian Amazonian fisheries, in the past (since 1991) fishers needed to have a professional fisher's license for at least three years and be registered with the national social security program in order to benefit from a "closed season unemployment insurance" benefit. This system has evolved through legal reform in 2003, organizing artisanal fishers through membership in *colônias*, which require payment of dues, and licensing of all artisanal fishers.

3.1.3. Landscape-level resource management and conservation instruments

The concession forestry model is a landscape-level instrument used to manage timber resources according to principles of sustainable management, where access is granted to an applicant based on adherence to a number of conditions such as the development of a forest management plan and usually an application for an annual (or other periodic) cutting permit to log a certain amount of trees in a specific area. Voluntary third-party forest management certification, such as FSC certification of forests managed for timber production, is a form of landscape-level resource management that combines biodiversity and ecological conservation interests. Certified forestry requires observance of all national legal requirements on access and logging activities as well as the development of a management system that conforms to a specific set of standards and criteria incorporating environmental and labor safeguards. Large-scale mining concessions granted to firms generally require adherence to particular guidelines that include the preparation of environmental and social impact assessments and mitigation plans to restore areas after mining activities are completed.

In cases where land or some set of its resources are owned communally or where access rights to state-owned areas such as reserves or parks are granted to individuals or communities, landscape-level systems of resource management and access have also been applied. Such systems require social organization and oversight, such as membership in a cooperative or community governed by an authority, such as a local council, that oversees access and rates of exploitation. They also often mean managing across country boundaries, as in the case of NTFPs in southern Africa (Wynberg et al. 2012, minerals in the Great Lakes region (IPIS 2012), and timber in a large part of Africa.

In Brazil's state of Pará, agro-extractive settlement (PAE) projects are designed around sustainable management of floodplain resources through co-management systems involving state natural resource agencies, communities, and organized groups such as fisher organizations (*colônias*). Currently, 24 PAEs cover 480,000 ha and involve 8,500 families (43,000 people). PAEs are now organized into a Forum of PAEs, which includes representatives from relevant NGOs.

DRC's artisanal mining concessions are an example of a landscape-level policy, where a certain area is designated, and membership is overseen by cooperatives that facilitate registration of individual miners with the relevant authority (SAESSCAM) and are supposed to monitor working conditions, and develop social programs aimed at demobilization of miners, as well as oversee extracted volumes and assist the state in collecting levies on volumes extracted. In practice, the ability of SAESSCAM to perform these functions is extremely limited, in part because much of the artisanal mining that occurs is outside designated zones (Putzel and Kabuyaya 2011). In addition, SAESSCAM relies on cooperatives to organize miners and provide social services, but according to IPIS (2012) these suffer from "corruption, inability to cover the territory under their responsibility, a lack of means, lack of personnel and lack of capacity and technical knowledge." Meanwhile, the various mechanisms such as Certified Trading Chains and closed pipelines are mechanisms used to address cross border trade in mineral rich landscapes (IPIS 2012).

3.1.4. Bans/moratoria on harvesting/extraction

In response to informal resource harvesting, or extraction that continues in violation of established formal rules, at various times governments have at times instituted moratoria aimed at all informal activities or in some cases access to specific resources.

An example of a general moratorium was a ban issued in 2010 on all artisanal mining in the provinces of North and South Kivu and Maniema in eastern DRC. The moratorium was implemented soon after the adoption of the US Dodd-Frank act, which brought new attention to the continued trade in conflict minerals. While the pressure of this attention has been cited as a rationale for the ban, the IPIS report mentions several other potential motivations, such as a tactic to increase the control of industrial miners over their concessions, or to divert attention from other systemic problems in the sector. The moratorium however was ineffective, and resulted in a de-facto ban on minerals from the region, with economic effects on poor miners, and it was soon lifted (IPIS 2012) but not before it provoked a migration of artisanal miners from the east of the country to Katanga province in the south, resulting in unplanned settlements and new environmental threats (Putzel and Kabuyaya 2012).

At the level of specific products, our case studies mention bans on commercial harvesting in Brazil of *pirarucu*, a large Amazonian fish and *Hoodia* in Namibia and the Northern Cape, South Africa and surrounding countries. Both species are protected under CITES. In the case of *Hoodia* one result of

the moratorium was leakage through the Western Cape province, which, as previously mentioned, did not have a similar moratorium nor limits on volumes of material traded.

3.2. Trade

Enforcement of formal systems that govern access to land or rights to withdraw specific resources requires capacity to monitor, oversee, and verify compliance as well as to impose penalties for noncompliance. In all of the cases reviewed in this study, enforcement of rules of access is complex for a number of reasons, including geographic challenges related to the distance of the places where resources are located to urban centers, the nature of the resources at hand (their transportability, e.g.), as well as national and regional capacities of relevant oversight and policing authorities. These issues are also critical to consider in the case of informal timber access and trade. Enforcement is also challenging along frontiers and border regions where control of movements and exports is difficult due to insecurity or corruption of local officials. For these reasons, instruments to verify the legal origin and conformity to fiscal rules are applied at points of transit, domestic trade, and export.

In the case of timber, instruments to verify the legality of product being transported range from hammer marks and various forms of transport permits documenting the origin of the product to chain-of-custody certification associated with a forest management certificate. Where there are doubts about legal origin, buyers of the product may be required to follow a due diligence procedure where proper documentation is required at all points along a supply chain, and where the end user may be made responsible to verify (e.g. through periodic evaluation) the reliability of legality verification along the supply chain. The cases in this study include a range of instruments related to transport and trade, with the closest parallels to FLEGT found in the case of minerals traded from the DRC, upon which the remainder of this section will focus.¹¹ A number of the mechanisms developed to regulate flows of minerals from sensitive areas of the DRC to the international market may inform EU efforts to exclude from its supply chains timber originating from informal domestic markets in VPA signatory countries.

3.2.1. Certification systems for artisanal minerals from the DRC

¹¹ A number of export permit systems pertaining to Southern African NTFPs exist, but are generally not clearly linked to the social and environmental goals of the described efforts to formalize access to and ownership of the resource base. In one case, CapeNature, the provincial conservation authority in the Western Cape issued permits to traders for the export of wild-harvested *Hoodia* spp. The permits restricted the size of the plant harvested, but did not limit volume, leaving the door open to unsustainable levels of product from neighboring countries to be exported through the province. In the case of Brazilian fisheries, the McGrath et al. study mentions one nascent initiative to certify trade in sustainably produced *pirarucu*, a key fish resource with an established market and ecologically well suited for management.

Certified Trading Chains for 3T minerals

Since 2008, a program developed by the German Federal Institute for Geosciences and Natural Resources (BGR) has operated in collaboration with authorities in the African Great Lakes Region to implement a voluntary system of Certified Trading Chains (CTC). An alternative to boycotting minerals potentially associated with conflict, the goal of the CTC system is to link downstream buyers of minerals to sources of minerals that are associated with responsible mining practices and good governance in the artisanal mining sector, and was first applied to the activities of five 3T mining and processing companies in Rwanda. The system was designed to include 20 certification standards including provisions for transparency, attention to environmental impact and compliance with various human rights and labor criteria. The standards are based on five principles:

1. Verified origin of minerals and transparency;
2. Prohibition of child labor and fair working conditions (including constant improvement of health and safety measures);
3. On-site security, without infringing on human rights;
4. Community consultations prior to and during mining operations (including dialogue regarding gender, socioeconomic and development aspects affected by such operations); and
5. Continual improvement of environmental performance.

The CTC system requires an independent auditing process consisting of on-site inspections and an evaluation report reviewed by a Certification Working Group composed of several governmental agencies and BGR.

The Regional Certification Mechanism (RCM) of the International Conference of the Great Lakes Region (ICGLR)

Mentioned previously, the IGCLR is a regional intergovernmental body established in 2004 to address a number of concerns that affect security among its 11 member states, including trade in conflict minerals. The IGCLR established a Regional Certification Mechanism (RCM), to improve the collection and sharing of data on mine-site security, export revenues and payments along the supply chain, and to guide companies in mitigating environmental impact and providing social services for the labor force. So far, DRC and Rwanda are the only nations that have incorporated RCM into their national mining codes. The RCM requires certification of mine sites in a regional database and incorporates chain of custody (CoC) tracking from the point of extraction to the point of export. The system relies on government verification at different points in the supply chain and due diligence by exporters, upon which an export certificate is contingent.

The RCM is one of the tools of the Regional Initiative on Natural Resources (RINR), which also is supposed to include an independent whistle-blowing platform, a validation and processing entity, and an investigative body. The DRC's National Certification Initiative (NCI) is designed to implement the RCM, and includes a CoC system encoded in the National Certification Manual, to be implemented in 2013. The NCI will compile and transfer statistics to the ICGLR Secretariat which is based in Bujumbura, Burundi.

Although it is too early to assess the performance of the IGCLR and associated mechanisms, according to IPIS (2012) they hold promise in terms of reducing corruption across the region, tracking illegal trade, improving rights and safety of artisanal miners and improving livelihoods. In

addition, there is potential to facilitate investigations that elucidate flows of minerals and finances that are associated with armed groups and contribute to conflict.

The International Tin Research Institute (ITRI) Supply Chain Initiative in the DRC and Rwanda

As of 2012, 67% of global refined tin was produced by ITRI members, who operate along the entire tin supply chain, comprising smelters and processors, miners, traders and users. The ITRI traceability system relies on two types of tags: a mine tag and a trader or processor tag, which are attached to bags of minerals at the points of extraction and processing. Tags have a unique reference number, which is logged at each level of the supply chain along with identifying data including: mine of origin, quantity, dates and method of extraction; locations where minerals are consolidated, traded, processed and upgraded; and the identification of all intermediaries, consolidators or other actors in the upstream supply chain. The logged data is then entered into the iTSCi online database. The system incorporates a risk assessment and audit of companies by Channel Research.

3.2.2. Other traceability and verification systems

Trading Centers initiative

The Trading Centers Initiative was launched in late 2009 by the Government of the DRC, the United Nations DRC mission and the International Organization for Migration with a budget of US\$1.3 million from donors including the UN Peace Building Fund. Trading Centers are supposed to protect buyers and sellers in a competitive market without interference from armed groups by linking trading posts through a secured transport route to market towns near the Rwandan border. Although not under similar security conditions, the case of Cameroon's recent reforms towards an improvement of the domestic timber market shows some similarities with the 'trading centers initiative' inasmuch as the Ministry is trying to set up walled 'markets' in several cities where only 'legal' timber can be deposited and traded.

Closed pipelines

Mineral traders in the eastern DRC provinces of North and South Kivu dominate the 3T trade, but they are not directly linked to extraction and receive supplies from numerous intermediaries. In order to protect its own supply chains, which originate in a more secure part of the country, the government of the southern province of Katanga created a system of "closed pipelines" which vertically integrates production, processing and export. By imposing a stiff tax on transfers of cassiterite (tin ore) to other provinces, Katanga discourages leakage of locally produced ore through other export points. Minerals entering the closed pipeline are tagged in the presence of government administrators with assistance from ITRI staff and sold to a partner company. A similar closed pipeline has been organized to supply coltan (tantalum) to a number of electronics multinationals. In the cases of VPAs, closed pipelines are similar to the virtual 'corridors' that countries like Cameroon have to establish in order to be able to differentiate timber from neighboring countries (such as CAR or Congo) entering the country and being either processed in Cameroon or exported to the EC.

4. Concluding remarks

Formalization processes associated with the development of an international regime targeting an environmental or social problem of global importance in the current age may be based on the best of intentions. As we have seen in the sector-specific cases covered in this report, the explicit goals of formalization included resource conservation, peacebuilding and local rights to use and access resources. Nonetheless, the process of prohibiting existing practices or aligning those practices to another set of rules involves adjustments to human behavior, changes in who has access to resources and who is excluded, the introduction of new agents of power (of oversight and enforcement), and variations in the quantities of resources traded and the directions of trade that can affect markets and prices.

A fundamental element of all extractive resource sectors is tenure – tenure of the land and its waterways, underground resources such as minerals and water, and biological resources such as timber, non-timber forest products and agricultural products. In their analysis of formalization processes, the case studies above recognize a certain set of risks associated with defining formal resource regimes where there is unclear tenure. However, there are also risks inherent to the *clarification* of tenure. In their analysis, Peluso et al. (2012) find that this risk is particularly acute if the formalization of tenure is accomplished as an exertion of the power of the State and geared towards the endowment of tenure to a single user. In their estimation,

“Formalization of property rights guarantees neither fair nor equitable distribution of land and land-based resources. Rather, it is no more than an instrument of registration, a technical fix that empowers the state and provides state backing to the formal rights holder. This is one reason that we caution against basing all property rights in land-based resources on a single owner, single-use model; nor do we think all rights can or should be subsumed under territorialized forms of management alone. The outcomes of land formalization programs—the variations in their effects—differ *because of* the varied historical, geographical, and social contexts within which they have been applied. Any formalization program will articulate with, change, or be changed by pre-existing legal, political, social relations and institutions, as well as with the differences characterizing them.”

We outline below a number of actual and expected benefits of formalization processes associated with the cases we have presented, as well as a number potential risks. Taken together, they can be seen as potential “trade-offs” that need to be taken into account by policy makers.

4.1. Actual or expected benefits of formalization

Increased visibility: The formalization of ownership, access and trade in land and natural resources enhances the ability of institutions, including state regulatory agencies and powerful non-governmental institutions such as NGOs and corporations, to obtain more information about the ownership of land and resources and the trading of those commodities in the market. Information

on access rights can allow interested parties to exclude people without formal rights, thereby securing or protecting an area or a resource. Information on trade flows allows enforcement agencies to intercept and apprehend resources that are being transported by people who do not have the legal right to do so. At the same time, those who are excluded from these resources may be thrust into poverty and/or forced to find alternative licit and illicit means of survival.

Clarity of ownership with alienation rights: Clear ownership of a commodity (land, minerals, timber, etc.) is fundamental to the market system, in which the right to sell is predicated on legal possession. With formalization, interested parties receiving the legal proof of ownership of a commodity may often (but not always) also have the right to permanently dispose of their interest in the commodity. Thus, for example, an individual or community that receives title to a piece of land may receive payment from the sale of that land to a private party, and use the income from that sale to purchase goods they would prefer to have in place of their continued access to or use of the land and its resources. The production of clear ownership may, however, exclude a multiplicity of other users from resources they once depended upon for their livelihoods. Women, people with mobile livelihoods, and minority ethnic groups may be the most negatively impacted.

Clarity of use rights (e.g. concessions): Access to resources on state lands or lands belonging to a public entity can be granted to individuals, communities or institutions including corporations for a given period of time, generally in exchange for taxes and usage fees, which may be based on land area or volume of resources extracted. Through formalization, access can be denied to people who use the resource without the permission of those empowered to grant it and awarded to people who are able to obtain the permission. The ability of the state and its agencies to award use rights is a source of revenues that, if properly managed, may be used for the benefit of some or all citizens. Such “clarification” offers the same potential issues for marginalized groups within the population mentioned in the section above.

Power to administer punishment: Formalization provides the grounds to apprehend, prosecute and punish individuals that operate outside the formal system. These grounds are a source of power to restrict the activity of people who continue, despite the implementation of a formal system, to enter areas to which they are not legally entitled and to harvest or extract resources that they do not have written permission to access. The ethics and moral conditions under which these punishments are meted out must be seriously considered, however.

Centralization of power and authority: New formalization efforts, especially if they are negotiated at a supra-state level and require subsequent restructuring of a sector by states, are likely to result in a centralization of power and authority over territory and resources. If this occurs without social unrest, the state may experience greater control over lands and resources and thereby have a higher ability to protect the environment and prevent informal actors from over-exploiting resources to benefit themselves or their communities. At the same time, a weakening of customary or local institutions may lead to greater social or regional inequalities over time. It is unclear that centralization of authority is a desirable outcome of VPAs in a number of countries where decentralization policies are still in process.

Reduced conflict over resources; reduced flows of resources to armed groups: Formalization can clarify the rights and responsibilities of multiple parties with different interests in relation to land or a resource, thereby reducing conflict. If successful, formalization can restrict flows of resources to

individuals or groups that operate against the interests of society, such as armed militias seeking to destabilize an area or the state. However, crimes and criminals are very subjective categories and as an outcome of formalization, criminalization of marginalized people is a risk that needs to be carefully examined to prevent impinging on the rights of vulnerable people.

Empowerment and financial benefits to local resource users: If formalization is designed with the intention of benefiting local resource users, who in developing countries often include economically marginalized populations, benefit flows to those users may increase and they may be empowered. This may occur if formalization occurs in response to a grassroots social movement. Alternatively, it may occur in an environment of legal pluralism as numerous rule-making bodies at different social scales implement changes in the direction of a higher goal such as equitable access and benefit sharing and conservation or sustainable use of shared resources.

Implementation of better employment practices: Formalization brings workers into the regulatory systems governing employment, which can entail a number of important benefits. These include worker safety rules, such as use of proper equipment and protective clothing, proper treatment of hazardous materials, access to various forms of insurance such as health insurance and social security, and rules that promote job security. Labor laws also generally prevent the abuse of child labor, and in some countries to varying degrees prevent discrimination based on gender and other identity categories.

Prevention of environmental injustices: By bringing informal resource extraction into a formal regulatory framework, deleterious effects of the informal activity can be prevented or mitigated through planning and oversight. These include, for example, disposal of hazardous materials and damage to vegetative cover and water courses that result in erosion or water pollution.

4.2. Risks associated with formalization

Expropriation and exclusion, loss of rights

From a social perspective, one of the more extreme outcomes of a formalization event is the expropriation or exclusion of an entire class of people formerly engaged in the sector, or the prohibition of activities or access such that those people experience a loss of rights they once enjoyed.

Formalizing ownership in land also means that lands that are not “owned” by individuals or groups are often designated “ownerless” or “vacant” and become the property of the state—what is problematic is that these lands may be used seasonally, or in less visible ways than sedentarized agriculture and state use/sale of these lands can lead to diminished access and food security for the users of these “vacant” lands. For example, in Cambodia, a World Bank land titling effort led to the privatization of lands between villages which was formerly determined to “have no owners” and was communally managed. As titling took place, those villagers lacking connections with state were excluded from these lands while village chiefs and their families as well as national and international

businessmen benefitted from agribusiness and forestry concessions in these areas (Biddulph 2011, 227 [citing Van Acker 1999, Biddulph 2000]; Peluso et al. 2012).

The DRC 3Ts mention a case in which a “clean” supply chain is created to provide minerals known to be extracted in formalized mining sites, creating “islands” of privileged miners, who are eligible to receive various types of assistance and benefits, and an exclusion of people living and mining in areas beyond those islands.

Conflict, militarization and violence

According to Peluso et al. (2012) formalization involving the granting of titles over land (and, we would argue this would also extend to granting natural resource concessions) leads to conflict because such titles are generally superimposed upon existing forms of land rights. If sufficient consideration is not given to those prior rights because they “complicate the formulas and make implementation too difficult”, the memory of those rights results in a perception of usurpation that engenders conflict. Even when ‘cultural factors’ are considered by formalizers, conflict and resource scarcity may arise due to a lack of consideration of resource use (e.g. herd size on pasture land) (Peluso et al. 2012, 10).

Criminalization

The criminalization of informal sector actors is a potentially severe risk in formalization processes. The direct social effects of criminalization of prevalent informal practices include the disruption of lives of informal actors via arrests and imprisonment. In the case of Zimbabwe’s gold mining sector, as described by Spiegel (2013), following formalization police crackdowns resulted in the arrests of tens of thousands of people and prison terms for a few up to as long as five years. In the case of need-motivated activity by economically marginalized groups, such events could have major deleterious effects on family livelihoods. We would also argue that the risk for conflict arising from popular sentiments of injustice might also be very high.

Enforcement failures

Enforcement of newly formalized regimes of resource access and trade often fails due to lack of capacity to effectively police activities of informal actors, especially in remote areas. For example, in the case of baobab in Zimbabwe one forest commission office enforces sustainable harvest over an area of over 3000 km², which is not sufficient.

Lack of enforcement and an indirect result of criminalization leads to a culture of evasion, thereby reducing the chance for the formalization process to be effectively implemented. For example, informal gold mining activities in Zimbabwe continued to be conducted at night, while in Indonesia, the location of gold mining in Kalimantan shifted to areas that were less accessible to police, resulting in new damage to forest areas (Spiegel 2012). Another risk of enforcement failure arises when local actors cease their informal activities but the area is subject to incursions by outsiders, as occurred in the case of *Pelargonium*, which was over-regulated in South Africa but accessed by collectors from Lesotho (Wynberg et al. 2012).

In the McGrath 2012 case, enforcement depended on voluntary environmental agents who would report violations to the natural resource authority. However, the authority has not taken such

reports seriously and has its own capacity limitations, resulting in a culture of impunity and an erosion of the efficacy of the entire system.

Adverse effects on women and marginalized groups

In general, it can be drawn from the cases that unless equity is the reason for the formalization process (and even then) those who enter the process with less power often lose out. In Southern Africa, formalization of trade in NTFPs across borders gave officials a reason to stop and search women, which made them vulnerable to other forms of abuse and caused many to withdraw from the business and cede their role to men. Historically, in Cameroon, ethnic groups that conformed to colonial rules were called “assimilated” and those who didn’t were considered as different: indigenous or autochthonous groups with different and weaker resource rights (Peluso et al. 2012).

Economic losses from sector

Sectoral reform that alters extraction rates can cause economic losses from the entire sector, affecting revenues along the supply chain and to the public sector. In the case of the 3T sector (IPIS 2012), although a presidential ban on artisanal mining failed to curb extraction, it resulted in an undeclared but *de facto* embargo on the material from the US and EU markets: the market was effectively scared off. The resulting decline in sales reportedly had major effects on the livelihoods of economically vulnerable miners and their families. We would argue that in this particular case, a decline in purchasing from one market could lead to a shift in sales to markets with fewer restrictions, such as South-East Asia, the Middle East and Africa.

Barriers to entry

The application of new standards of access or trade in resources, particularly those that require certifications or permissions that are costly to obtain, can act as a barrier to entry to certain user groups that do not have the financial resources or requisite skills or knowledge to fulfil new requirements. For example, in southern Africa, although formalization efforts resulted in an increase in cultivation of *Hoodia* and *Pelargonium* which has improved resource sustainability, poorer producers with less access to land, capital and technical capacity have been excluded from the market.

Exacerbation of poverty

The implementation of formal land and resource regimes can create or exacerbate poverty. As the Peluso (2012) case study tells us, for example, formalization can “facilitate or finalize” loss of smallholder lands which formerly were not as easily alienable or tradable, but suddenly can be transferred and monetized to resolve an immediate financial hardship.

Sometimes formalization involves removal of informal market outlets, such as the case of market stalls for the sale of baobab crafts that were destroyed in Zimbabwe in 2005 as part of a campaign to remove illegal settlements in urban areas and along roads.

Elite capture and new forms of corruption

When rules are changed and new formal systems of resource access and trade are introduced, there is a danger that elites at the local, regional or national scale will identify opportunities to derive

benefit for themselves at the expense of small-scale informal actors. This may or may not involve corruption, in which officials establish themselves as gatekeepers to conformity with new practices, extracting bribes from sectoral actors in order to facilitate a false demonstration of conformity to the new legal system. Many examples of both elite capture and corruption are to be found in the case studies.

For example, business people in Thailand who had advance knowledge of formalization of land titling would rush to purchase land in the customary market prior to the arrival of official surveyors; in a case from Cameroon as well, elites were the only ones able to pay and wait for land titles (Peluso et al. 2012).

In Pará, Brazil, where a fundamental component of formalization of artisanal fisheries was membership in a *colônia* and registration to receive social security insurance, the system was abused by criminal gangs who administered the insurance. They falsely registered thousands of individuals who were not fishers in return for a share of half the insurance payments before the abuse was discovered and the false registrations were cancelled by the Ministry of Fisheries and Aquaculture.

Erosion of customary systems and sustainable practices

Customary systems of land and resource ownership, management and trade can be weakened or disrupted by the introduction of a new formal system. For example, when state institutions were introduced in Zimbabwe to regulate the use of baobab products, traditional village heads who formerly managed the resource lost their role in granting harvesting rights and administering fines to violators of local customary rules.

Ecological disturbance caused by a race to access and claim-staking behavior

When a formalization process is announced, it can trigger ecologically destructive behaviors by stakeholders who are eager to either obtain land or resources prior to the implementation of the process (to avoid losing the opportunity) or to demonstrate ownership by showing a history of presence or access. In the case of the former, customary or informal actors may try to extract all benefit from a land before losing access to a formal owner. In the latter case, a customary or informal landholder may clear forest or engage in some other conversion activity in order to substantiate a history of presence, whether or not legitimate, to surveyors involved in titling.

The NTFP case study mentions several examples where aspects of formalization regimes increased overharvesting of a resource. For example, payment of marketing levies on baobab bark has led some harvesters to behave as if they have a license to harvest as much as they wish, and debarking has reportedly increased with the levy.

5. Recommendations

1. Pay particular attention to the inclusion of human rights and customary law while reviewing all laws relevant to the forestry sector. Without such a review—which to date has not been completed—the VPA effort faces the potential for failure in the countries who are already adopting these processes. The case studies included in this report show that a formalization effort requires articulation with existing practices in order to function without automatically engendering the series of risks we have outlined in the previous section. Without knowing what those existing practices are, it is impossible for new norms to articulate with them in any logical way. Further, without meaningfully engaging with existing practices, formalization efforts may change existing practices, negatively impacting the well-being of local people, the benefits of the sector to the national economy, and the management of forests. Alternatively, failing to take customary law and practice into account may confound meaningful progress towards the goals of FLEGT as conflict or resistance arises due to these new processes' inability to integrate with historically embedded, customary institutions. In countries that have already signed VPAs and where formalization is in process, a systematic and broad-based system of monitoring social and economic effects is recommended.
1. In the process of reviewing customary law (and rights and practices), take into account less visible uses of land and resources, including seasonal activities and occasional uses by particular social groups, including migrants.
2. In development of new rules to govern small-scale artisanal (and currently informal) logging practices, seek to understand how use of particular cutting and transport equipment might relate to sustainable harvest and trade. (For comparison, specifications on minimum size of fishing nets have been used to prevent overfishing of small fish.)
3. In reviewing customary laws, rights and practices, study their history to ensure that the current status is not the current manifestation of a highly dynamic system of resource access, ownership and trade. This is important in order to avoid the potential negative outcomes associated with “writing in stone” a current practice that may be only one of many options used by social groups over time, and where equity and environmentally sound management depend on flexibility.
4. In each VPA country, assess to what degree formalization in response to VPAs is likely to favor the land and/or resource ownership rights of large-scale vs. small-scale actors and private vs. communal owners or users.
5. If a program of formalization of the domestic timber market is undertaken in VPA signatory countries, rules should be examined in the context of the different characteristics of different timber resources. This might begin with a typology of timbers according to their ecological role and regeneration patterns, with fewer restrictions placed on fast growing, ecologically unexceptional, and quickly replaced endemic timbers.
6. If new rules are imposed, they have to be enforceable as well as equitably and consistently enforced to avoid a culture of impunity that undermines the system. This means that a “scalar” approach to enforcement might be advisable, with the “weakest” parts of the sector being granted a “period of grace” or of learning before implementing and enforcing any new

rules. Rules must be fair and without deleterious effect on any stakeholder group, but there remains in most countries a huge gap between the capacities of large-scale, formal companies vs. small-scale, informal ones to influence and abide by the law.

7. Consequences of violating new rules must not be so great that local people have incentives to remain informal or to bribe officials to avoid punishment. I.e. the cost of complying should not be greater than the cost of operating illegally. For this to become a reality, in many VPA countries the Ministries of Finance and Justice must be included into discussions about the future of the sector to a much higher degree than has been done to date. Formalization of the informal forestry sector cannot be accomplished by Ministries of Forests or Environment alone.
8. Identify ways to link the European market directly to providers that acquire timber from well-managed community/communal and small-scale forests e.g. by either subsidizing the licensing procedures or reducing their costs, based on regular evaluation of forest management. A “closed pipeline” model (such as developed as one of the instruments of formalization of artisanal mining) or certification (e.g. SLIMF certification¹²) may be useful. However, efforts would need to be taken to ensure that selective purchasing does not exacerbate local inequities. Such assurances could be achieved by following recommendations two and three (above) to fully understand user groups, dependencies on various resources, and the power dynamics in the area of interest.
9. Develop approach in formalization that addresses the complexities of regulation and enforcement in international transboundary landscapes. For example, efforts to control illegal mineral trade in the Great Lakes region of Africa addresses both resources access, domestic commerce, and transborder movements of minerals. This would also necessary for timber, especially in regions with challenges similar to those of the DRC, with its porous border and recent history of conflict.

¹² Certification of small, low-intensity managed forests (SLIMF) is an eco-certification for timber extracted from or produced according to simplified forest management criteria geared towards smallholder and community/communal managed forests. See, e.g. Putzel et al. 2012.

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