



Implementing Forest Landscape Restoration Initiatives

Tenure, Governance, and Equity Considerations¹

Rebecca McLain², Manuel R. Guariguata³, and Steven Lawry⁴

Forest Landscape Restoration: The need for a rights-based approach

Forest landscape restoration (FLR) initiatives are being launched over much of the global South. These initiatives seek to restore ecological functions and associated ecosystem goods and services while improving social outcomes (Mansourian and Vallauri 2014). The scale of these initiatives is such that large geographic areas as well as large numbers of people will be affected in the countries that choose to participate in them. The Bonn Challenge issued in 2011 aimed to reforest 150 million ha of degraded and deforested land globally by 2020, a figure that the 2014 New York Declaration on Forests (NYDF) increased to 350 million ha by 2030 (Climate Focus 2016).

The NYDF identifies tenure rights and responsibilities as important enabling conditions for FLR. However, despite rhetoric to the contrary, many FLR initiatives involve top-down planning approaches. In consequence, FLR initiatives risk taking insufficient account of how local tenure arrangements affect restoration investments, the extent to which community members are able to participate in designing restoration activities, and whether restoration strategies account for the interests of women and other marginalized groups.



Tenure matters because it provides a foundation for local governance, the stewardship of land and natural resources, and local livelihoods including benefit-sharing, and empowerment and human rights.”

(Larson and Springer 2016: 5)

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2 Rebecca McLain, Portland State University and CIFOR Research Consultant

3 Manuel Guariguata, Principal Scientist and Team Leader, Forest Landscape Restoration Research, CIFOR

4 Steven Lawry, Director of Equity, Gender and Tenure Research, CIFOR.

We examine here the proposition that FLR initiatives are more likely to achieve their objectives when focused on areas where forest communities have clear rights to land and natural resources, or when coupled with efforts to enhance tenure security and rights of self-governance over resources. We draw on REDD+ and FLR experiences to explore how the interaction of tenure with broader governance systems may affect achievement of restoration goals. We discuss the policy implications of our findings and lay out an analytical framework to guide a field-based study aimed at supporting tenure and governance interventions associated with FLR initiatives.

Forest landscape restoration principles

FLR is “a planned process that aims to regain ecological integrity and enhance human wellbeing in deforested or degraded landscapes” (Stanturf et al. 2017). FLR is integrative and transdisciplinary, and seeks to expand opportunities for making land-use trade-offs over large areas (Stanturf et al. 2017). Restoration approaches range from passive (e.g., letting forests regenerate naturally) to intensely active (e.g., planting trees or shrubs), with many gradations in between.

Proponents of FLR recognize that tenure and governance systems affect the viability of restoration initiatives. The NYDF’s Goal 10 calls for strengthening “forest governance, transparency, and the rule of law, while also empowering communities and recognizing the rights of indigenous peoples, especially those pertaining to their lands and resources” (Climate Focus 2016: 7). All ten of the guiding principles for landscape approaches identified by Sayer et al. (2013) (see Box 1) relate in some way to governance, and one principle, clarification of rights and responsibilities relative to forests, relates directly to tenure rights.

Sayer et al. suggest that rights clarification is just one of a number of options that practitioners can choose to apply when designing and implementing landscape-scale initiatives. We take a stronger position, arguing that what is required in many cases is rights recognition or devolving a larger array of actual rights, and that doing so is *not* optional in most situations if FLR initiatives are to be successful. By “actual rights” we mean rights as they exist in practice rather than rights that exist on paper (Sikor et al. 2017). We contend that rights provide communities and individuals the agency and capacity needed to withhold agreement when decisions about restoration design and implementation do not meet their understandings of what is reasonable. Although safeguards such as free, prior informed consent (FPIC) processes and voluntary guidelines, are important, they do not give communities or individuals the same degree of political leverage as the possession of and capacity to exercise rights. Moreover, if communities and individuals lack rights to land and resources, the remaining guiding principles will be challenging to apply.

Box 1. Ten principles for landscape restoration

1. Incorporate continuous learning and adaptive management
2. Begin with zones of agreement
3. Pay attention to connectivity at multiple scales
4. Recognize the multi-functionality of landscapes
5. Involve multiple stakeholders in design, implementation, and evaluation
6. Ensure transparency in planning and decision-making
7. Clarify rights and responsibilities to land and resources
8. Implement participatory and user-friendly monitoring
9. Focus on enhancing resilience
10. Strengthen stakeholder capacity

Key concepts: Tenure and governance

Tenure consists of “the social relations and institutions governing access to and use of land and resources” (Larson and Springer 2016: 5). The rights and responsibilities associated with different forms of tenure determine “who is allowed to use which resources, in what way, for how long and under what conditions, as well as who is entitled to transfer rights to others and how” (Larson and Springer 2016: 5). During the past three decades, a movement toward devolving forest rights from centralized states to indigenous peoples, communities, individuals, households, and firms has occurred in many parts of the globe (Larson and Dahal 2012). However, the degree to which new rights holders are able to benefit varies. Centralized governments often devolve use rights while reserving or conditioning more important rights, such as the rights to manage resources or exclude others (Sikor et al. 2017).

Building on Schlager and Ostrom’s (1992) bundle of rights concept, Sikor et al. (2017) identify eight types of rights to consider when assessing tenure rights (see Box 2). Holders of authoritative rights are in a stronger position relative to other rights holders since they can decide which rights to allocate and to whom. Sikor et al.’s updated bundle of rights is useful as a framework for capturing use rights linked to indirect benefits and authoritative rights that specify the scope of control rights, both of which have become increasingly important rights associated with forest management. It is important to recognize also that in many societies, rights to trees, particularly economically or culturally valued species, are separable from rights to land (McLain and Lawry 2015). Moreover, trees play an important role in tenure claims with both the clearing and planting of trees serving as a means for establishing rights to land in many cultures (Corbera et al. 2011).

Box 2. The bundle of tenure rights

Schlager and Ostrom's (1992) bundle of rights

- Right to access land or resources
- Right to withdraw resources
- Right to manage
- Right to exclude others
- Right to alienate (transfer rights)

Sikor et al.'s (2017) updated bundle of rights

Authoritative rights: Empower the holder to make decisions about control rights

- Right to define control rights
- Right to allocate control rights

Control rights: Empower the holder to control use rights

- Right to manage
- Right to exclude
- Right to transactions
- Right to monitor

Use rights: Empower the holder to use land or resources

- Right to direct use
- Right to indirect use (ex: payments for ecosystem services)

Tenure security is even more critical than tenure rights in shaping rights holders' willingness to engage in conservation (Baynes 2015; Lawry et al. 2016). Tenure security is a reflection of a "landholder's confidence or belief (real or perceived) that agreed-upon rights...will be enforced and upheld by society more broadly" (Robinson et al. 2017: 4). Having clearly defined and enforceable rights to land reduces the uncertainties associated with making investments, increasing the likelihood that rights holders will perceive that they will benefit from conservation improvements (Lawry et al. 2016). However, providing more secure tenure does not necessarily lead to improved ecological conditions. For example, when high opportunity costs are associated with leaving areas in forest, landholders may resist restoring forest cover on cleared land (Ickowitz et al. 2017).

The governance system in which tenure rights are embedded also matters. Governance consists of "the ways and institutions through which individuals and groups express their interests, exercise their rights and obligations, and mediate their differences" (Colfer et al. 2010: 26). Governance systems affect whether rights can be exercised, whether de jure rights translate into de facto rights, and whether acquiring land rights improves social and economic outcomes (He and Sikor 2017). When designing and implementing tenure

interventions, it is therefore important to consider the form of the intervention, variations in social relationships and behavioral change vis-à-vis the natural environment resulting from the intervention, and how the intervention interacts with the broader policy, cultural, and political context (Agrawal et al. 2014).

Lessons from REDD+ - Tenure challenges

Because FLR initiatives linked to the Bonn Challenge are quite recent, few scientific studies examine the links between those initiatives and tenure, governance, or equity. We therefore turned to the REDD+ literature to gain an understanding of the tenure challenges FLR initiatives are likely to face at sub-national levels, as well as the strategies that might enhance tenure security. The Center for International Forestry Research's (CIFOR) Global Comparative Study on REDD+ (GCS-REDD+) (Sunderlin et al. 2014), including a component focused specifically on REDD+ and multi-level governance (Ravikumar et al. 2015), were particularly rich sources of information on this topic. Six major tenure challenges identified in the REDD+ literature are described below.

Challenge 1 - Lack of rights, unclear rights, and tenure insecurity:

The absence of formalized tenure rights, unclear rights, and tenure insecurity have been identified as disincentives for local communities and individuals to participate in REDD+ initiatives (Sunderlin et al. 2014). At the same time, many communities see participation in REDD+ projects as a means by which they can acquire formal rights to land (Dokken et al. 2014; Duchelle et al. 2014; To et al. 2017).

Challenge 2 - Overlapping tenure claims: Overlapping claims may occur between formalized systems and customary tenure systems, resources administered by different government ministries, private concessions and community lands, and between two or more customary systems (Felker et al. 2014). Conflicts linked to overlapping claims are more likely to arise in forests with high carbon values than in those with low carbon values (Sunderlin et al. 2014).

Challenge 3 - Inconsistencies in statutory laws and policies:

Inconsistencies in statutory laws governing land tenure and land use can undermine conservation efforts (Sunderlin et al. 2014). In Indonesia, for example, agricultural law recognizes customary tenure whereas forest law does not (Resosudarmo et al. 2014), creating conflicts between communities and forest officials over whether forest dwellers have the right to clear land or harvest trees in their customary territory.

Challenge 4: Lack of government capacity or political will to enforce forest regulations:

In many countries, government forest departments responsible for enforcing forest laws either lack the capacity or political will to do so (Sunderlin et al. 2014). Addressing lack of political will to enforce rights requires broad governance reforms that reduce corruption and judicial incompetence rather than tenure reform (Naughton-Treves and Wendland 2014).

Challenge 5: Lack of community capacity or political will to enforce forest regulations: Studies of REDD+ have found that communities tend to be able to enforce rules against small-scale outside users but are often unable to enforce the rules against large-scale outside users (Sunderlin et al. 2014). Internal compliance with forest use rules is also often low, indicating a lack of capacity or will to enforce the rules against fellow villagers (Sunderlin et al. 2014).

Challenge 6: Legal and customary norms conflict with conservation objectives: Some prevailing customary and legal norms for asserting and maintaining land claims provide disincentives for engaging in REDD+. Clearing land for agricultural production is the primary means for establishing land claims for customary and statutory tenure systems in many countries (Sunderlin et al. 2014). Conversely, letting land go permanently out of agricultural production traditionally has weakened land claims under both systems (Resosudarmo et al. 2014).

Lessons from REDD+ - Strategies for addressing tenure challenges

REDD+ initiatives generally have relied on three major strategies to address or forestall tenure-related challenges. Often the strategies are used in combination rather than as stand-alone approaches. Each of the strategies, including their strengths and shortcomings, is described below.

Strategy 1 - Formalizing rights and strengthening enforcement: REDD+ projects often provide support for securing recognition for or clarifying community land or resource claims, along with strengthening enforcement capacity of community organizations or government agencies (Duchelle et al. 2017). Although many communities and individuals welcome formalized rights, these rights often come with conditions, such as detailed management plan requirements, that effectively deprive landholders of crucial rights (Larson and Springer 2016). Additionally, to save time, REDD+ projects have tended to negotiate resource claims with lower-level administrative units rather than advocating for national-level tenure reforms. Although effective as a short-term strategy, over the long term these locally negotiated arrangements could become problematic if their validity is not recognized at higher levels. REDD+ projects typically have relied on non-governmental organizations to broker negotiations over tenure claims (Sunderlin et al. 2014). Reliance on NGOs as brokers, however, also carries risks, as they are not accountable to the local population and may have agendas that conflict with the interests of communities (Beymer-Ferris and Bassett 2012). Lastly, although clarifying rights to carbon is of critical importance for REDD+ projects, surprisingly few projects have devoted significant resources toward advocating for laws or policies defining how carbon rights should be allocated (Saeed et al. 2017).

Strategy 2 - Expansion of alternative livelihood opportunities: A second approach used in REDD+ projects to address tenure challenges is to increase alternative

livelihood opportunities for rural residents whose access to forest resources is curtailed as a result of project-related conservation or protection (Sunderlin et al. 2014). In projects involving payments for ecosystem services, assistance consists of direct payments to individuals or households or support for community-level infrastructure development (Duchelle et al. 2017). However, payments to individuals have not always been large enough to cover opportunity costs, particularly for poorer segments of the population (Duchelle et al. 2017). The format of payments also matters, with results-based payment schemes less likely to be pro-poor than up-front payments (Skutsch et al. 2017). The type of forest conservation or enhancement activities supported by REDD+ projects also affects the distribution of costs and benefits, with agroforestry, forest restoration, and afforestation/reforestation initiatives tending to provide more benefits for poorer segments than initiatives that seek to reduce deforestation by setting aside forested areas (Lawlor et al. 2013).

Strategy 3 - Broad-based stakeholder engagement: Many REDD+ projects have sought to incorporate stakeholder engagement processes aimed at obtaining free, prior informed consent (Lawlor et al. 2013; Sunderlin et al. 2014). However, REDD+ stakeholder engagement processes have tended to be more consultative in format rather than offering opportunities for meaningful participation (Duchelle et al. 2017; Saeed et al. 2017). In general, community members have a poor understanding of REDD+, they are rarely involved in the design phase when the sideboards of the project are established, and marginalized groups, such as women and pastoralists, often are not included (Saeed et al. 2017). In a review of 41 REDD+ projects in 22 countries, Lawlor et al. (2013: 315) found that, "practitioners require more practical guidance on how to conduct community-level FPIC processes, especially in settings of non-cohesive communities with multiple sub-populations." Studies of the gender implications of REDD+ have found that few FPIC processes are structured in ways that effectively engage women (Bee and Bassett 2017; Larson et al. 2015).

Moving from REDD+ to FLR

In extrapolating lessons from REDD+ to FLR initiatives, it is important to recognize that these initiatives have different goals. REDD+ focuses on reducing carbon emissions and other benefits, such as enhancing ecological integrity and social well-being, are ancillary. FLR aims to improve ecological integrity and social well-being, with enhanced carbon stocks an ancillary benefit. Additionally, FLR proponents are struggling with how to determine what FLR is and to identify the "elements, principles, criteria, and indicators of FLR that collectively constitute a holistic approach to restoring forests and landscapes" (Chazdon 2017). Lack of agreement on FLR terminology poses another challenge. Restoration means different things to different people and the "tyranny of trees" (Veldman et al. 2015) can lead to unintended ecological and social consequences. Moreover, ecosystem restoration standards have been critiqued as inappropriate for addressing landscapes where social factors are as important as ecological factors (McDonald et al. 2016).

Tenure and governance in FLR principles

FLR's guiding principles draw attention to the importance of clear land and resource rights, transparency in governance, and broad-based stakeholder engagement for successful implementation of restoration activities over large geographical scales (Sayer et al. 2013). These principles are highlighted in FLR's methodological tool kits. For example, the Restoration Opportunities Assessment Methodology handbook (IUCN 2014: 48-49) for developing national FLR strategies lists "policy, legal, social, and/or institutional conditions" that "create a favourable context for forest landscape restoration," as necessary factors. Among the conditions listed are the existence of "clear and secure (formal or customary) rights to the benefits that would accrue from restoration," "clear and enforceable regulations on land-use change," and "enforcement of regulations that require forest restoration or that clearly regulate the conversion of natural forests". Barriers to FLR include "undefined land and water rights" and "heavy regulation and excessive red tape". Some national restoration opportunity assessments have included descriptions of tenure and governance barriers to FLR (Rwanda Ministry of Natural Resources 2014, Uganda Ministry of Water and Environment 2016). However, recommendations for addressing those barriers lack specificity. Other FLR opportunity assessments, such as Kenya's (Gichu et al. 2016), have not addressed tenure or governance issues at all. Pistorius et al.'s (2017) recently completed FLR assessment for Ethiopia may be a useful model for future assessments as it provides a detailed analysis of tenure and governance enabling conditions for specific types of FLR practices, as well as recommendations for actions that can address conditions likely to negatively affect the uptake of each FLR practice.

Tenure and governance in FLR practice: Barriers and enabling factors

A review of efforts to implement FLR in Brazil (Ball et al. 2014), Ethiopia (Lemineh and Kassa 2014; Pistorius et al. 2017), Ghana (Baruah et al. 2016; Foli et al. 2017), Indonesia (van Oosten et al. 2014; van Oosten et al. 2017), and Madagascar (Mansourian et al. 2014; Mansourian et al. 2016) enabled us to compile a preliminary picture of how tenure and governance factors interact with FLR activities on the ground.

Tenure rights

Chief among the barriers identified to participation in FLR were lack of recognized tenure rights — both for communities and individuals — and, in some cases, lack of clarity about who has rights and responsibilities over land and forests. In the Ethiopian highlands, where the demand for construction and fuel wood is high, the issuance of state-sanctioned land certificates that provided households with long-term use rights helped catalyze extensive participation in afforestation and reforestation. In Madagascar and Ghana, where the state claimed ownership over forests, including those located

outside of national reserves, NGOs involved with pilot FLR projects played a critical role in helping communities with still-functional customary governance structures negotiate for formal recognized rights to use and manage forests located within their customary territories. In other cases, such as a national park in West Java, communities negotiated informal agreements. In the West Java case, residents of a newly established protected area agreed to plant trees on land located within the park in return for the right to grow crops. However, unlike the previous examples, where rights are backed up formally, the informality of the agreement places it at risk of being revoked at the park managers' discretion.

Conditions placed on the rights to harvest trees are another common barrier. For example, farmers in Ghana initially resisted planting trees in areas located outside forest reserves owing to a law that specified that revenues from the sale of trees harvested on those lands belonged to the state. National-level tenure reforms that permitted farmers to have 40 percent of the revenues from trees that they had planted helped overcome this barrier. Laws in Ethiopia, Brazil, and Ghana that prohibit harvesting native tree species serve as strong disincentives for farmers to protect natural regeneration or plant native species. Identified as problematic in all of the cases was the weak capacity or lack of will on the part of national governments to enforce rights. Programs to support community-level enforcement have helped fill this gap in the Ethiopia, Ghana, and Madagascar cases.

The main themes emerging from these FLR experiences with respect to tenure are: 1) it is important in some cases to devolve or recognize rights to land and trees, preferably in agreements sanctioned by the state; 2) in other cases what is needed is devolution of a broader array of rights, such as the right to harvest or transport native species or rights to share in benefits; and 3) in all cases, rights enforcement, preferably with a focus on community-level enforcement capacity, needs to be strengthened.

Governance

Lack of trust between social actors was identified as a problem for FLR implementation in all of the cases. In all five cases, longstanding distrust existed between community members and state officials. Distrust between community members and NGOs was initially a challenge in Madagascar and Brazil, and the international NGOs involved had to invest substantial time and resources in building relationships of trust before the projects could move forward. Contributing to feelings of mistrust were widespread perceptions that NGOs, community leaders, and government officials lacked accountability. Also common to all of the cases was a lack of integration between national and sub-national policies and programs, gaps in communication between the land administration, forestry, and agricultural sectors, and gaps in connectivity between different types of social actors (i.e., civil society organizations, businesses, government officials, etc.). The pilot FLR projects in Ghana and Madagascar were able to overcome some of the lacunae

in social connectivity through supporting broad-based stakeholder participation in restoration planning and implementation. However, researchers have critiqued the process in Ghana as being dominated by wealthier and politically more powerful community members. Lack of broad-based and meaningful community engagement was identified as an issue in Brazil, Indonesia, and Ethiopia as well.

With respect to governance, the main themes emerging from FLR experiences are: 1) emphasis needs to be placed on strengthening community capacity to engage meaningfully in FLR governance in design, implementation, and monitoring and evaluation phases; 2) steps to ensure transparency and accountability of community leaders, NGOs, government officials, and other stakeholders with a major influence on FLR need to be taken; and 3) actions that increase connectivity across scales, sectors, and social actors are essential.

Policy implications and analytical framework to guide future research

The lessons learned thus far from REDD+ and pilot FLR initiatives point to the need for a new rights-based paradigm for FLR program design and implementation. Rights devolution has the potential to catalyze investments in local governance capacity, public infrastructure, and private enterprises, with associated social and ecological benefits ((Baynes et al. 2015). Five elements critical to a rights-based approach are outlined below. Interventions associated with addressing all of these elements need to pay explicit attention to addressing gender and other social inequalities in access to rights, benefits, and social connectivity.

Rights and tenure security: Rights combined with tenure security provide the foundation of a rights-based FLR approach. There are two critical components of a rights-based approach: rights recognition/devolution and rights actualization.

- *Rights recognition/devolution:* In cases where informal customary rights already exist, securing formal recognition of those rights is recommended as a way to provide landholders with greater confidence that they will be able to benefit from FLR activities, and to protect their rights from being eroded or taken away if FLR activities increase the value of the land or resources on it. Where informal customary rights do not exist or have been greatly weakened, policy interventions that support rights devolution are recommended.
- *Rights actualization:* Equally important, however, are interventions that support rights actualization. These interventions should seek to reduce conditions that lead to tenure-related disincentives to restoration, improve accountability, provide accessible and affordable conflict resolution processes, enhance judicial competencies, and build local-level enforcement and management capacities.

Enhancing connectivity between scales, sectors, and social actors: The experiences from REDD+ and early FLR pilots point to the existence of important gaps in connectivity between and within scales of governance, as well as between sectors and different types of social actors. A key focal area for social connectivity enhancements for FLR governance is support for the development of community-based user group networks with strong internal and external links to other stakeholders. Experiences in Nepal and Latin America show that user group networks initially play an important role in ensuring efficient government implementation of rights commitments, and then shift into promoting commercial investment, including advocating for investment-friendly regulation. Other important focal areas include strengthening the between national and sub-national levels of government; between forestry, agriculture, and land administration stakeholders; and between communities and private sector stakeholders.

Program designs that generate widely shared benefits: The inequitable distribution of benefits has been identified as a major shortcoming of REDD+ projects in spite of social safeguards, with indigenous peoples, women, and poorer households tending to be left out (Barletti and Larson forthcoming; Larson et al. 2015; Howson 2017; Ickowitz et al. 2017). Similar issues risk arising with FLR initiatives, which are likely to have high opportunity costs for agriculture or may negatively impact secondary rights holders' access to resources such as forest products and fodder. Providing strong forest-based benefits helps address the high opportunity costs of forests in relation to agricultural land uses. Payments for ecosystem services programs rarely provide sufficient incentives, particularly where land is owned by the state and the state is the principal beneficiary of REDD+ payments. A rights-based approach needs to explicitly incorporate rights recognition and actualization interventions that provide women and other marginalized groups with rights or that strengthen their existing rights to land and trees.

Support for technical and institutional capacity building at various levels: Experiences from REDD+ and early FLR projects indicate a strong need for bolstering technical and institutional capacity at all levels to implement forest and land rights reforms. Calls for guidance in how to conduct meaningful FPIC processes is an important case in point, as are calls for more accessible conflict resolution processes. As a starting point, we recommend that FLR interventions include support for strengthening community capacity to participate meaningfully in designing and implementing FLR projects, as well as bolstering the capacity of government, NGO, and private sector stakeholders to engage with communities in a genuinely collaborative manner.

Support for shifting forest agencies into extension and away from law enforcement: In contexts where a greater share of forest use and management rights are devolved to communities, we recommend

concomitant reforms of forest policy and regulations in ways that limit direct regulation of forest use by the state. Responsibilities of forest agents should focus less on law enforcement and more on provision of technical assistance. Forest agents should be given the training and resources needed to provide extension services effectively. Sound forest management and conservation practices should be promoted through training, incentives and investments in sustainable forest-based enterprises. The state should rightly retain the regulatory powers needed to protect public health and safety, and protect forests where community institutions prove ineffective in managing forests sustainably.

Framework for identifying FLR tenure and governance reform opportunities

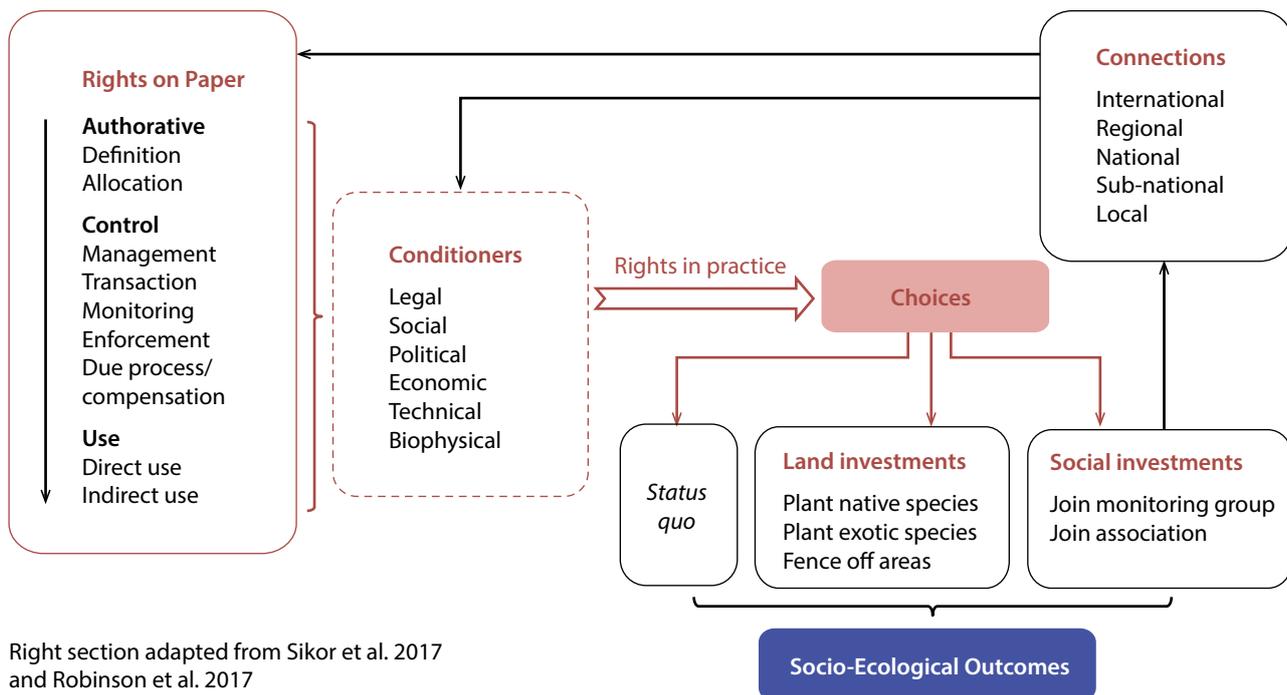
The theory of change framework for rights actualization depicted in Figure 1 is useful as a guide for identifying where and what kinds of FLR tenure and governance reforms are needed to support large-scale restoration. The framework draws on Sikor et al.'s (2017) updated bundle of rights, and takes a "bottom-up" approach to assessing the enabling and disabling conditions for forest landscape restoration activities for different types of landholders and land users. Our rights actualization theory of change posits that the rights that an individual, household, firm, or community has on paper are conditioned by various factors, such as the political, economic, and social context, among others. These conditioned rights constitute "rights

in practice", and it is with respect to these rights, rather than rights on paper, that people make investment choices, such as whether to protect natural regeneration or plant a particular species of tree in their fields. However, people are not without agency, and they may choose to take steps to change their rights on paper or the factors that condition those rights. A particularly important step consists of building or leveraging social connections that will improve the likelihood that their efforts to make changes will be successful. Ultimately, the choices that people make based on their actual rights are what lead to socio-ecological outcomes. Understanding the pathways by which particular choices are arrived at for specific types of FLR practices is critical for designing and implementing effective FLR initiatives.

Conclusion

In a recent workshop in Brazil, restoration experts called for an international standard that "will help to ensure that restoration in agricultural landscape mosaics brings benefits to multiple stakeholders and leaves the landscape better than it was" (Chazdon 2017). Such an international standard must proactively and explicitly include tenure and governance reforms at multiple scales in design criteria if FLR initiatives are to be operationalized in ways that enable them to achieve their objectives of simultaneously enhancing ecological integrity and social well-being in just and equitable ways.

Framework for Tenure Analysis



Right section adapted from Sikor et al. 2017 and Robinson et al. 2017

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