EXPLORING PROPERTY RIGHTS AND TENURE IN INTEGRATED LANDSCAPE MANAGEMENT

A Scoping Study from the Landscapes for People, Food and Nature Initiative

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ABOUT

The Landscapes for People, Food and Nature Initiative

The Landscapes for People, Food and Nature Initiative is an international collaboration for knowledge sharing, dialogue and action to scale up integrated landscape management in order to achieve three simultaneous goals: improved food production, ecosystem conservation, and sustainable livelihoods. Visit peoplefoodandnature.org for more information.

EcoAgriculture Partners

EcoAgriculture Partners is a pioneering non-profit organization that advances the practice of integrated landscape management and the policies to support it. From critical analysis of policies, markets, and land use practices, they generate innovative research, tools and methodologies that help landscape managers and policymakers create and sustain integrated agricultural landscapes worldwide. EcoAgriculture Partners serves as the global secretariat for the Landscapes for People, Food and Nature Initiative. Visit ecoagriculture.org for more information.

Cornell Ecoagriculture Working Group

The Cornell Ecoagriculture Working Group (CEWG) is a forum where the Cornell community interacts to advance knowledge and understanding about the collaborative and integrated management of landscapes. It promotes and evaluates the practice of integrated landscape management throughout the world to improve outcomes for biodiversity conservation, agricultural sustainability, local livelihood security and climate change. The CEWG has roots in the Department of Natural Resources and collaborates closely with EcoAgriculture Partners.

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INTRODUCTION
Integrated Landscape Management (ILM) approaches have become increasingly popular. ILM brings stakeholders together to pursue multiple objectives for sustainable agriculture production, biodiversity conservation, ecosystem management, and human well-being.

With ILM, by strengthening the coordination and participation of stakeholders through inclusive processes of decision-making, socio-ecological landscapes can provide the full range of goods and services for those who depend on them. To be effective, ILM approaches require land tenure and property rights to be well understood, negotiated and defined. Landscape governance is concerned with the procedures, policies, processes and institutions by which land, property and other natural resources are managed. Property rights that define which stakeholders can access, use and benefit from natural resources are an important consideration of any ILM initiative. Tenure security, whether individual or communal, is considered to be an important pre-condition for stakeholder investment in sustainable landscape management.

Social-ecological landscapes comprise multiple ecological niches and land uses, as well as diverse, and often overlapping, jurisdictions for land and resource management which can pose particular challenges for land governance and property rights. The complex constellation of rights and various degrees of security to those rights that exist can be confusing. This confusion makes planning difficult. Expanded investment in ILM, therefore, requires more nuanced understanding of the contextual factors, evolving practices, and policy mechanisms by which tenure security can be assured and by which sets of rights can be negotiated and renegotiated among stakeholders. There is little guidance available to help leaders of landscape initiatives evaluate property rights issues, facilitate productive dialogue and negotiations on rights among stakeholders, design innovative strategies, or maneuver political challenges.

To help address this gap, we undertook this scoping study to explore key issues in property rights and tenure which may affect prospects for the practice of ILM. The multi-level, multi-sector, multi-actor governance required for ILM has generated a host of innovations around land and resource rights that need attention and better understanding (Kozar et al, 2014). New social actors are becoming involved in resource management, and new types of benefits for rights-holders are stimulating reformulations and expansions of many types of property rights.

This study lays the foundation for a framework to more rigorously analyze issues and opportunities related to integrated landscape governance and property rights. It offers insight into innovative strategies that key actors are pursuing to address landscape governance issues in the context of overlapping and often competing claims and interests. And it evaluates their subsequent outcomes, including successes, trade-offs and unintended consequences. The experience and cases reviewed draw broadly from the experience of different types of integrated landscape management initiatives, such as landscape and forest restoration, Reducing Emissions from Deforestation and forest multiDegradation (REDD+), biological corridors, integrated watershed management and integrated urban landscapes.

The methodology for the scoping study was developed by EcoAgriculture Partners’ Director of Collaborative Management and Cornell
Ecoagriculture Working Group leader Louise Buck, as part of her graduate level ‘special topics’ course on land governance and property rights in the context of integrated landscape management. Students in the course were all experienced in aspects of land governance and property rights in ‘real world’ contexts prior to and/or during graduate school. Formal and grey literatures on property rights were reviewed, as related to multi-stakeholder, multisector landscape initiatives. Experts on land governance and land rights were identified and interviewed by the seminar members about their innovative projects. Finally, case studies were prepared and analyzed to capture examples of intersection between tenure, property rights and landscape management. The focus was on agricultural and forest land rights; further work will be needed on water, wetlands and pastoral rights, as well as on gender differentiation of rights, also critical for ILM.

Section 2 of the study provides a brief literature review on land tenure, property rights and their integration into issues of climate change and food security in the context of ILM. Section 3 provides an overview of ongoing international work on property rights and land tenure, in relation to ILM. Section 4 presents five case studies that depict a variety of contexts in which property rights issues arise in efforts to manage land for multiple purposes and beneficiaries. The cases highlight complexities in shaping land rights for optimal landscape management, as well as emerging possibilities for tailoring land rights to increasing social demand for transparency and inclusivity in governance, as well as equity in access and ownership. Section 5 takes stock of the current state of knowledge and analysis, and suggests next steps to fill knowledge gaps and advance more effective property rights strategies that will secure the full range of functions from a landscape and benefits to its stakeholders.
Landscape approaches offer valuable opportunities to address local and global challenges ranging from food security to biodiversity conservation and climate change. As you will see in this section, the eight types of property rights and the increasing application of ILM highlights the need to rethink the concepts of public and private goods that underlie property rights regimes, and the extent to which different aspects of the bundle of rights should be negotiated and protected.
Overview

*To address local and global challenges ranging from food security to biodiversity conservation and climate change, landscape approaches offer valuable opportunities.*

Landscapes are multifunctional spaces defined by their natural features and ecology, as well as the local context, including cultural and historical land use patterns (Bailey and Buck 2016; Minang et al 2015). Healthy landscapes provide food, sustain dignified livelihoods, and preserve ecosystems. While landscape approaches are commonly referred to in the literature, there is a wide variety of terms and definitions (Ros-Tonen et al. 2018), although all refer to some form of integrated approach (Reed et al. 2016). Landscape approaches can be defined as long-term collaborative processes that bring together diverse stakeholders to allocate and manage land while balancing multiple, possibly conflicting interests surrounding its use (Denier, 2015; Sayer et al. 2013). Such approaches seek to replace “silo” thinking with a more integrated perspective, to address institutional conflict and promote synergies (Bastos Lima et al. 2017). In natural resource management, landscape approaches are often used to negotiate the trade-offs between conservation efforts and agricultural production by addressing the inadequacies of a sectoral approach (Bastos Lima et al. 2017; Zanzanaini, Thi, & DeClerck, 2017). Integrated landscape approaches have the potential to contribute significantly to the political dialogue around international commitments, such as the sustainable development goals (SDGs), environmental conventions, and rural-urban linkages (Reed et al. 2016; Thaxton, et al. 2015; TP4D 2018).

Within the decision-making process of the landscape approach, Sayer et al. proposed ten principles that emphasize a people-centered approach to best integrate agricultural and environmental priorities (2013). The first principle details why management practices need to learn from the failures of previous land management cases to better align with dynamic landscape processes. This need for adaptive management, coupled with collaborative efforts, allows for the outcomes to become an ongoing negotiation among stakeholder groups without limiting the approaches or options that will lead to success.
EcoAgriculture Partners has contributed to the discourse by offering an analytical foundation for ILM. Scherr and her co-authors characterize ILM as composed of five reinforcing components: (1) agreed landscape objectives among key stakeholders across sectors; (2) identification of synergies and trade-offs across land uses and land users and strategies to address them (e.g., to achieve contiguity of wildlife habitat or hydrological systems, or achieve scale in provision of ecosystem services); (3) promotion of land use practices that contribute to multiple objectives; (4) markets, policies, and programs that encourage synergies and reduce trade-offs; and (5) institutions that enable collaborative planning, implementation, and monitoring among stakeholders (2013; 2014).

In 2015, The Little Sustainable Landscape Book was published, stemming from a collaborative effort among more than 25 institutions working on landscape approaches, to align definitions (Denier et al. 2015). ‘Integrated Landscape Management’ has become the umbrella term encompassing the myriad types of landscape initiatives, which have diverse entry points and approaches for collaboration, but in which both land managers and stakeholders strive to achieve multiple objectives within the landscape to enhance local livelihoods, biodiversity, ecosystem services and agricultural production (Denier et al. 2015, TP4D 2018).

Studies have documented the expansion of ILM globally, including assessments in Africa, Latin America, Asia, and Europe (Estrada-Carmona et al. 2014; García-Martín et al. 2016; Milder et al. 2014; Zanzanaini, Thi, & Declerck 2017). A recent special issue of the journal Environmental Management illustrates a movement towards integrated landscape approaches (Ros-Tonen et al. 2018). In conjunction with this expansion is greater recognition of the influence of property rights, tenure, and other features of governance on the effectiveness of landscape initiatives (Estrada-Carmona et al 2014; Meinzen-Dick & Mwangi 2009; Reed et al 2016; Sayer et al 2015, 2017; Sikor, He and Lestrelin 2017; Wheatland 2014).
Property rights in landscape governance

‘Landscape governance’ refers to the institutional arrangements and general process of steering human-nature interactions in a defined geographical area (Ros-Tonen et al. 2018).

The last couple of decades have seen a focus on various policy reforms that have led to a growth in involvement of many more groups and social actors in the decision-making process in a landscape, in addition to the previous community actors. Governance of the landscape has been further complicated by the growing influence of external stakeholders, for mineral extraction, large-scale agribusiness, and also forest conservation and restoration projects, through land acquisition or other land rights transfers (Gnych et al. 2018; Reed et al. 2016; Scoones et al. 2013).

This complexity of institutions in landscapes means that different actors; varying in size from transnational corporations, international non-governmental organizations (NGOs), and national governments to smaller subsistence farmers; have diverse but legitimate claims on the land and fill different niches in the landscape. Consequently, property rights regimes which define which stakeholders have access to and benefits from natural resources are an important aspect of landscape governance.

In light of these developments, Sikor, He and Lestrelin (2017) have proposed a new framework for analyzing natural resource property rights regimes, that builds on the earlier schema developed by Schlager and Ostrom (1992). Sikor, He and Lestrelin identify eight types of property rights (see “Table 1 – Eight Types of Property Rights (Sikor, He and Lestrelin, 2017)”, below). “Use rights” include the rights to both direct and indirect benefits. “Control rights” include rights to manage, exclude others from using or benefitting, undertake transactions related to the resource and monitor the resource. “Authoritative rights” refer to the power to define and allocate control rights, which may be held at local, regional, national or global levels.

Sikor, He and Lestrelin’s research suggests that natural resource governance is trending towards compensated exclusion where local people might have access to indirect benefits from local resources but due to the influence of international actors, do not have control rights (2017). While they are not entirely dispossessed from local natural resources, they have a limited say in how they are managed. For example, increasingly large agribusiness companies tightly control the farm management practices of contract farmers, and even directly manage their lands. The result is, with the exception of future compensation, a potential loss of incentive for local people to conserve natural resources.

Meanwhile, population growth, population decline, migration and urbanization are all shifting the demand for land and resources, and generating new claims on them.

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1 Schlager and Ostrom (1992) disaggregated a bundle of property rights for natural resources: access, withdrawal, management, exclusion and alienation. They also distinguished rights of authorized users claimants, proprietors and owners.
Additional challenges for property rights and tenure in the context of ILM

Familiar issues of ownership and use rights to land, water, forests and other resources affect incentives for pursuing collaborative strategies for ILM.

Multi-stakeholder, multisector landscape partnerships and governance bring additional complexities. The high level of interconnectedness of ecosystem services flowing across a landscape means that legitimate claims by different stakeholders around resource use and management conflict with legitimate claims of other users and uses. Climate change is forcing de facto shifts in boundaries of land use suitability for crop production, grazing, forests and habitat for wildlife conservation. Sets of rights have de facto interactions even when rights over particular resources are rigidly separate in law. Patterns of rights constrain and open opportunities for finance and investment in sustainable landscapes. In many cases, successful acquisition by communities, women, and marginalized groups of rights over land and resources open up a whole new set of challenges for sustainable development that require redefining rights, roles and responsibilities for using and investing in those resources. In some cases, indigenous groups have
reinvented the meaning of territorial rights.

Referring back to the key features of ILM described by Scherr, Shames and Friedman (2013), analysis of property rights regimes in reference to ILM must especially examine how they can:

• Align stakeholders’ collaborative long-term vision for the landscape (including values around land and resource access)

• Enhance the incentives and opportunity to achieve multiple objectives from land use and management

• Facilitate the resolution of spatial trade-offs or synergies across land uses within the landscape

• Facilitate collaborative planning among stakeholder groups

• Enhance local stakeholders’ negotiating power.

ILM often arises from the recognition of the need to negotiate existing rights in order to achieve sustainability at landscape scale. Depending on the social, economic and political context in which multisector landscape partnerships arise, the scope for such negotiations may influence both use and control rights. Local, state and national government decisions to grant such authoritative rights to landscape partnerships or formalize rules negotiated within the partnerships will greatly influence their scope and impact.

Expanded investment in integrated landscape approaches requires more nuanced understanding of the contextual factors and policy mechanisms by which tenure security can be assured, and sets of rights renegotiated among stakeholders. Both de jure and de facto rights are in fact constantly evolving and being renegotiated. Even where shifts in systems of rights and land management have been negotiated, their implementation has been poorly documented, and there has been little systematic assessment of experience in the context of integrated landscape management.
Questions arising around property rights and tenure in ILM

*ILM highlights the need to rethink the concepts of public and private goods that underlie property rights regimes, and the extent to which different aspects of the bundle of rights should be negotiated and protected.*

Some of the emerging questions include:

- How can land managers who have only rental or sharecropping rights be incentivized for long-term conservation or regeneration?
- How can absentee landlords be incentivized to steward environmental assets?
- How can the landless be incentivized to steward environmental assets that they use?
- How can stakeholder negotiation processes for ILM be implemented in ways that secure property rights for marginalized groups?
- How can the rights of landscape rights-holders be secured politically and legally in their negotiations and struggles with powerful external actors?
- When should authoritative rights over natural resources be granted to multisector landscape partnerships or initiatives?
- What systems need to be in place to ensure that the bundle of rights of land and resource rights-holders adjust over time to new conditions of natural resource pressure in a landscape?

The next section looks at the focus of existing research and advocacy around land and resource rights, and the tools and innovations being developed by them that are especially relevant to ILM.
This section offers insight into the global movement being advanced by a broad spectrum of civil society and applied research organizations and their public-sector partners to democratize land governance and property rights processes.
International discourse and action around property rights and tenure

We focused our study on 12 organizations who are among those most widely cited in literature and reports on the promotion of economically-viable, socially-inclusive, environmentally-sound and politically-feasible land governance and property rights innovations.

Table 2 (on page 18) summarizes key features of their thematic focus, drawn from documents, websites, and interviews from key informants in the organizations.

Across the 12 organizations, property rights and tenure work addresses a wide range of land and resource types: agricultural land, pastoral areas, trees/forests, carbon sinks, and to a lesser extent water, watersheds, irrigation systems, fisheries, biodiversity, and agrobiodiversity. Most ongoing work focuses on challenges for specific rights-holders in specific landscape niches. Thus many programs work on tenure security and empowerment for smallholder farmers; communal rights; territorial rights for indigenous peoples; equal rights for women; or halting land ownership concentration. The organizations are also highly concerned with resisting the power of external actors to control local land governance through land grabbing and corporate power. There seems to be less emphasis on rights of landless workers, renters/sharecroppers, and farmworkers, relative to other local actors who control land and resources.

Some groups are focused more on tenure program implementation around themes such as transparency in public policy and decision-making, accessible information, reducing corruption, public sector capacity, and efficient cadastral systems. A few groups emphasize design of tenure systems that have cross-sector implications, such as ways tenure rights can facilitate enterprise development, or better sustain ecosystems and conserve biodiversity. While most of the global work is focused on developing countries, more actors are starting to look at conditions in the industrialized world.

Areas of work highly relevant to ILM, related to analysis of property rights, advocacy and mobilization for rights, and tools, are described in the next section.
<table>
<thead>
<tr>
<th>ORGANIZATION</th>
<th>THEMATIC FOCUS</th>
</tr>
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<tbody>
<tr>
<td>Center for International Forestry Research (CIFOR)</td>
<td>Research on how devolution of forest rights affect forests and conservation outcomes, livelihoods, and local governance, and advance gender equity, to inform decision-makers.</td>
</tr>
<tr>
<td>IFPRI-Collective Action and Property Rights (CAPRI)</td>
<td>Research to assess when and how property rights and collective action are likely to affect the application of agricultural technologies and natural resource management practices based on their spatial and temporal dimensions.</td>
</tr>
<tr>
<td>Food First</td>
<td>Brings researchers, writers, and social movements together in a combined effort to amplify the voices, both U.S. and internationally, of those advocating for a new and just food system.</td>
</tr>
<tr>
<td>Global Land Alliance</td>
<td>Advances sustainable land and ecosystem management through tenure security by testing new approaches, sharing expertise and speeding up the resolution of land issues.</td>
</tr>
<tr>
<td>International Land Coalition (ILC)</td>
<td>Global alliance of 207 civil society and intergovernmental organizations that work together to realize land governance that responds to the needs and protecting the rights of the women, men, and communities who inhabit and manage the land.</td>
</tr>
<tr>
<td>International Livestock Research Institute (ILRI)</td>
<td>Research on how the management and use of livestock can improve the livelihoods of pastoralists focusses on ways that land rights can be secured by reforming policies, harmonizing laws, linking supportive institutions and empowering women.</td>
</tr>
<tr>
<td>Landesa</td>
<td>Partners with governments to improve land rights in more than 50 countries around the world. Since its inception in 1981, Landesa has helped achieve land rights reform for over 120 million women and men globally.</td>
</tr>
<tr>
<td>Land Portal Foundation</td>
<td>Global data aggregator that collects publically available data from a variety of sources around the world to improve documentation, mapping and monitoring of land governance issues through a platform that includes structured information, tools and services.</td>
</tr>
<tr>
<td>Oxfam International</td>
<td>Campaigns for securing land rights for the rural poor, working at the local village level and also working globally to help secure international agreements through a variety of stakeholders and methods.</td>
</tr>
<tr>
<td>Rights &amp; Resources Initiative (RRI)</td>
<td>Global coalition advancing forest tenure, policy, and market reforms through research, advocacy, and convening strategic actors to catalyze change on the ground.</td>
</tr>
<tr>
<td>Transnational Institute</td>
<td>Utilizes research, reliable information, sound analysis and constructive proposals to strengthen international social movements.</td>
</tr>
<tr>
<td>UN Habitat: The Global Land Tool Network (GLTN)</td>
<td>An alliance of partners committed to applying tools that improve land governance – the rules, processes and organizations through which decisions are made about land.</td>
</tr>
<tr>
<td>Via Campesina</td>
<td>International peasant movement serving as advocate for global land and agrarian reform.</td>
</tr>
</tbody>
</table>
Analysis of property rights

Particularly relevant to ILM is analytical work on multi-stakeholder landscape management, REDD+ landscape management, indigenous and community landscape management, participatory land use planning and multi-stakeholder governance.

Multi-stakeholder landscape management. Some of the groups have begun to explicitly address multi-stakeholder landscape management challenges. UN Habitat “recognizes that land is a finite resource and competition for it is intensifying due to rapid urbanization, growing populations, economic development, persistent insecurity of food, water and energy, and the effects of conflicts and disasters. Furthermore, the divide between urban and rural landscapes is diminishing as these areas are more interconnected by flows of goods, money, resources, and people. Climate change and different land-use patterns also affect rural areas, including farmland, drylands, wetlands and forests. Thus, UN Habitat is beginning to embrace a landscape approach as cities prepare for expanded urban growth and related land requirements.” ILRI “recognizes that multiple actors place competing demands on the landscape and that preserving and maintaining rangelands requires an integrated approach.”

CIFOR is seeking to understand how tenure rights affect people and groups in different parts of landscape mosaics that include forests and trees, and how to “sync up” different tenure regimes across diverse land uses. They investigate who holds rights for what uses such as grazing systems, crop lands, and forests, and what kinds of tenure arrangements can deliver security in every context. New work in Ethiopia, El Salvador, and Madagascar is examining tenure arrangements in different landscape mosaics. A local organizational innovation connects existing initiatives to form an alternative, participatory, ‘bottom-up’ model of multi-level forest governance (Mwangi and Wardell 2012).

The International Food Policy Research Institute (IFPRI)’s research has concluded that many ecosystems, such as rangelands, are defined by multiple users pursuing different livelihoods and production strategies; thus flexible tenure arrangements are needed to accommodate this diversity. They found that land titles can contribute to security, but not necessarily greater investment, and may undermine other rights (Dohrn 2006). Recent work by IFPRI, WorldFish, World Agroforestry Centre (ICRAF) and the Foundation for Ecological Security have evaluated structured approaches used in different resource and governance contexts for bringing together multiple stakeholders to manage and negotiating rights on resources. While some evidence shows that such collaboration can be difficult and in some cases (especially in decentralized areas) multi-stakeholder partnerships (MSPs) may become a burdensome additional layer of bureaucracy, they are widely reported to be a strong solution.

REDD+ landscape management. REDD+ projects are increasingly conceived and structured as multi-stakeholder landscape initiatives. Property rights have been identified as key challenges. Sarmiento and Larson (2017) reviewed multiple allegations of abuses of the rights of indigenous peoples
in the context of REDD+ with examples from Ecuador, Indonesia, Kenya, Peru, and Tanzania. Reed discusses how weak local understanding of REDD+ led Huaorani communities in Ecuador to sign commercialization agreements with ‘carbon cowboys’ that were subsequently litigated and canceled at high cost (2011). REDD+ currently enables revenue capture by private actors without benefits to communities, while results-based payments are not adapted to community-based projects. Based upon their review Sarmiento and Larson call for a rights-based approach to REDD+ where indigenous people and local community men and women are actively engaged as rights-holders, not ‘stakeholders’ or project ‘beneficiaries’.

The ‘External Evaluation of the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries – the UN-REDD Programme’ made further recommendations:

- Strengthen country ownership over all aspects of national REDD+ efforts, including the development of a more bottom-up approach.
- Initiate joint actions to address the key drivers of deforestation and forest degradation, by tackling issues and engaging relevant stakeholders (especially the private sector) early in the REDD+ readiness phase.
- Support country efforts to clarify the land and resource rights of forest-dependent populations, including carbon rights and the related distribution of benefits.

Bilateral and multilateral climate financing mechanisms should increase and expand dedicated funding streams for tenure reform and secure access to technical assistance. They should target the primary current and future drivers of deforestation and correlate legislative tools (e.g., moratoriums on logging/mining/conservation concessions) with incentives provided under REDD+. Governments, the international community (i.e., development institutions, multilateral initiatives, and civil society organizations), investors, and companies should support indigenous and community efforts to develop and defend their own conservation, livelihood, and enterprise models. Corporations and investors need to go beyond cleaning up their supply chains to altering their business models to cooperate with communities to protect their forest and land rights (RRI 2014b, 2017, 2018a, 2018b).

Indigenous and community landscape management. Community-managed landscapes are becoming a global trend (Baynes et al. 2015). This is partly because community-managed landscapes can be valuable for conservation (Harvey et al. 2008; Ceddie et al. 2015), in some cases comparable to the value of old-growth forests and pristine reserves (Jose 2012; Sistla et al. 2016; Vallejo-Ramos et al. 2016; Robinson et al. 2014; Buntaine et al. 2015). For example, Porter-Bolland et al. found that, as a whole, community-managed forests across the tropics showed lower and less variable annual deforestation rates than protected forests (2012). Furthermore, Ceddie et al. suggest that formally recognizing the rights of indigenous peoples and local communities may potentially slow deforestation and land degradation (2015). Blackman et al. showed that indigenous community management can advance forest conservation (2017). In all, community-managed landscapes offer potential management options that conservationists have recently acknowledged (Jose 2012; Sistla et al. 2016; Vallejo-Ramos et al. 2016; Garnett et al. 2018; Zafra-Calvo and Moreno-Penaranda 2018). Numerous studies have documented the effectiveness of community-led natural resource management where there are clear use rights, combined with self-governance over resources (e.g., Gnych et al. 2018; McLain et al. 2017; Porter-Bolland et al. 2012; Persha and Blomley 2009; Persha et al. 2010; Stevens et al. 2014; Zafra-Calvo and Moreno-Penaranda 2018).

Little is known, however, about how community-managed lands, along with associated livelihoods and land uses, may be leveraged to enhance
conservation (Sarkar & Montoya 2011; Garnett et al. 2018; Robinson et al. 2014). One institution that may be used to facilitate community-managed conservation is the Indigenous Peoples’ and Community Conserved Areas (ICCA), an organization promoted by the International Union for Conservation of Nature. Community-oriented landscape conservation approaches have been widely embraced more recently (Sistla et al. 2016; Vallejo-Ramos et al. 2016) and many international conservation initiatives now focus on multifunctional landscapes and not solely on protected areas (Robson & Berkes 2010; Sayer et al. 2013).

**Participatory land use planning.** To improve land rights in the context of ILM, Oxfam is investing in participatory land use mapping and planning that puts much of the power of determining land boundaries and the different types of land rights for each area in the community’s hands. In Ethiopia, ILRI is taking an innovative and integrative approach to address livestock management by supporting comprehensive spatial planning at the district level of government. The pilot project, which took place in the Werda District, includes the allocation of all types of land uses. Comprehensive planning brings multiple stakeholders into a public visioning process with representatives from each village and district-level land governance representatives.

Mapping out the locations of future agricultural development, human settlements, forests, and rangelands can go a long way toward ensuring that land remains available to pastoralists and other groups invested in livestock. However, the strategy of using comprehensive planning to allocate rangelands does have potential drawbacks. First, the process of land use planning may result in the separation of land uses rather than their integration. If land uses are separated, seasonal uses are likely to be prohibited or omitted in favor of other uses that can be present year-round. Second, plan enforcement may also limit the effectiveness of using land use planning as a strategy for rangeland protection because
plans are not legally binding. The third challenge is that land use policy makers may not have technical skills needed to use land administration technologies, such as proficiency in GIS and other mapping technologies. This requires that capacity-building be included in the land planning processes. One other area of innovation is joint village land use planning to protect rangelands between villages.

**Multi-stakeholder governance.** A number of groups are promoting and/or evaluating multi-stakeholder dialogue to foster recognition of local and community rights. CAPRI, for example, has coordinated research and outreach on how multi-stakeholder processes have helped communities secure rights to forests and strengthen land governance (Komarudin et al. 2008). Ratner et al. link local stakeholder dynamics to broader institutional and governance contexts in a framework designed to help build socio-ecological resilience where land and natural resources are contested (2013). Recent work by Ratner et al. on ‘polycentric governance’ stresses that the legitimacy and effectiveness of any layer of governance is bounded by the way it treats the levels below it as well as how it negotiates with the levels above (2018). Sattler et al. highlight the importance of having procedures in place including MSPs and related coordination structures that allow for polycentric mutual decision making and conflict negotiation to realize satisfactory outcomes across levels and sectors (2017).

The ILC provides guidance on the use of multi-stakeholder processes as a core element of contemporary land governance. Through its National Engagement Strategy (NES) for Africa, for example, the ILC stresses the value of multi-stakeholder processes in fostering inclusive decision-making in land governance, and provides guidelines for making MSPs for inclusive land governance efficient and effective (International Land Coalition 2017).

Overall, there is much for facilitators and leaders of ILM to learn from in this rich experience and analysis. However, little of this body of work examines interactions and negotiations among local stakeholders to manage trade-offs or find synergies among diverse groups and benefits/needs. Neither does it consider how formal or informal tenure arrangements might need to shift with shifting economic, climate or other changes in the landscape. This arena is ripe for further analysis.
Advocacy and mobilization for land and forest rights

**OXFAM, Landesa, Rights and Resources Initiative (RRI) and Via Campesina, with partners, have organized networks and techniques for effective advocacy for land and resource rights that can be of great value for stakeholders operating in integrated landscape partnerships.**

**OXFAM.** Oxfam is strengthening property rights for smallholder farmers and vulnerable populations by pursuing titles for private farmland through the formalization of rights via land titling. They also strengthen informal rights and customary use rights through internal village agreements, legal recognition, and formal registration. At the national level, the organization is assisting governments to develop strategies for land governance decentralization that respect and recognize traditional forms of land rights. This codifying of customary land rights in a map that can be updated and modernized with time helps to protect land and natural resources by protecting against outside investors determining property rights.

**Landesa.** Landesa was the world’s first NGO that partnered with governments to reform land tenure for the world’s poor. They partner with various stakeholders to alleviate hunger and address conflict and poverty that results from issues of land rights, always taking a gender sensitive approach. Working in 50 countries around the world, Landesa brings land tenure experts together with poor farmers, especially women, as well as government officials, to design appropriate research and practical solutions.

**Responsible Investments in Property and Land (RIPL).** The Landsea-led RIPL provides a set of standards to guide equitable private sector investment in land. The standards serve as a ‘step by step’ guide, taking into account an understanding that some policies may be difficult for some companies to understand and adhere to. Country specific and model guidelines have been developed, with Ghana and Tanzania serving as primary RIPL locations.

**Rights and Resources Initiative.** RRI facilitates multi-stakeholder dialogue to promote greater respect, understanding, and cooperation for the recognition of the rights of local peoples who live and depend on the land. This is done by responding directly to the priorities identified by local peoples. The impact of the RRI coalition is reflected in major tenure reforms in Brazil, China, and Indonesia; stronger advocacy in South Asia, Central America, and West Africa; improved corporate responsibility policy and standards; and mobilization of women’s natural resource rights in Latin America.
Land Rights Now. The “Land Rights Now Alliance” is a collaboration between Oxfam, RRI and the ILC that supports a global network of CSOs and NGOs who work to establish and secure land rights for vulnerable people. Within one year it had reached 600 organizations and communities, who coordinate advocacy and communications. Successes include lobbying a local court in Thailand to recognize the land rights of the Chao Lay, supporting a coalition of CSOs in Honduras defending women’s land rights, and organizing a petition signed by some 19,000 people on behalf of Panama village in Sri Lanka after they were evicted for a tourism project.

*International Land and Forest Tenure Facility (ILFTF)*. The ILFTF, or the “Tenure Facility,” is the only funding institution devoted solely to supporting demarcation and registry of Indigenous Peoples’ and local communities’ land and forest tenure rights. The ILFTF was created by RRI in 2014 and became an international foundation registered in Sweden in 2017. The Facility has provided financial and technical assistance that has enabled communities to advance their rights to almost two million hectares of land in six countries: Cameroon, Indonesia, Liberia, Mali, Panama, and Peru.

Via Campesina. With a network of 182 partner organizations, including research and political bodies in 81 countries, Via Campesina has successfully unified the voices of smallholder farmers and provided them with a platform from which to lobby for land and agrarian reform.

**BOX 2**

*Land Grabbing, Concentration, and Artificialization in the European Union*

Prepared by Elle Nevers, Cornell University.

Land grabbing, land concentration, and land artificialization—the control and concentration of land primarily for non-agricultural purposes like urban sprawl, real estate, tourism enclaves, and other commercial undertakings (Transnational Institute 2015)—are commonly associated with the Global South. But they are equally present in more industrialized countries, though they may manifest differently. In Europe, these phenomena have played a significant role in the decline of utilized farmland over the past 65 years, particularly in Eastern Europe, disproportionately impacting smallholder farmers who have difficulty competing against commercial giants for resources, land, and customers.

**PATTERNS OF LAND RIGHTS CHANGES**

The European Union (EU), with 28 member states (27 following the eventual withdrawal of the United Kingdom), spans 4.5 million square kilometers, 40% of which is used for agriculture, across several ecological zones. Although land uses vary across nations, the EU experienced a general decline in utilized farmlands between 1961 and 2015. A primary cause is the growing impact of land grabbing, land concentration, and land artificialization. Thus, while just 3% of farms over 100 hectares own 52% of farmland (336,000 farms controlling almost 91 million hectares), 20% of farms between 10 and 100 hectares control 37% of land; and 75% of farms own just 11% of farmland (Fedoroff et al 2016), Biodiversity loss is also directly attributable to these linked processes.

**CONTRIBUTING FACTORS TO LAND CONCENTRATION AND ARTIFICIALIZATION**

Four key factors contributed to these changes. Common Agricultural Policy (CAP) subsidies were reformed in 2013, to reflect the size of the agricultural holding rather than the production quantity in response to a growing trend of overproduction. As owning more land meant accessing larger subsidies, elite actors are incentivized to buy up large areas of land. Inflation of land prices has grown amidst growing tourism, real estate, and urban sprawl. Prime, arable farmland is leaving the possession of smallholder farmers (less than five hectares) and ending up in the hands of an elite few who often convert the land for non-agricultural uses. Agrofuel and bioenergy investments are growing by both foreign and domestic investors. As it is rarely smallholder farmers who are involved with the increased production of these bioenergy crops, this phenomenon further exacerbates land concentration. Finally, food market concentration indirectly contributes to land concentration. A mere ten percent of retailers control more than 40 percent of the food supply in the EU. Larger, more competitive firms drive out smallholder farmers. For example, in Austria only three companies control 80 percent of the food supply, in Germany four companies control 85 percent, and in Portugal three companies control 90 percent (Transnational Institute 2015).

**INNOVATIVE STRATEGIES: PARTNERSHIP AND DATA ACCESSIBILITY**

To address the problems of land grabbing and concentration, research entities, such as the Transnational Institute, advocacy organizations such as Via Campesina Europe, and political bodies, primarily the European Parliament, are increasingly collaborating (Kay 2018). Data and charts shared between these actors not only document land access and tenure security, but also deliver easily-interpreted data for the general public. Access to readable data enhances the power of marginalized groups by providing them with the knowledge and data to fight for improved land rights and tenure security.
Relevant tools and innovations

The broad community around land tenure and resource rights is developing numerous tools and innovations that could be of value in the applied context of ILM.

More effective research, analysis and reporting of tenure and rights information. The creation of widely-accessible, evidence-based reports on land access and tenure security data has both changed the way research data is utilized by stakeholders, and helped to redistribute power to marginalized groups through provision of the necessary documentation to advocate for improved land rights and tenure security. Meta-data standards (ILC’s Land Portal) are democratizing information and linking data levels. The Roots&Branches initiative, since 2018 hosted by the Global Land Alliance’s Center for Community Land Trust Innovation, is documenting the origins and diverse forms of community land trusts, and exploring their ongoing evolution. A new relationship between governments and citizens can emerge with open data initiatives because it implies that government information is a public good rather than keeping data under closed doors or under a paywall so only a few can access it. This idea has inspired exciting innovations and projects that can benefit both people and ecosystems. The Land Portal builds capacities of small organizations and instructs them on how to publish information using meta-data standards and vocabulary to create cleaner data that computers can harvest and make discoverable through the Land Portal.

The LandMark Map—Global Platform of Indigenous and Community Land—is the world’s first data platform to graphically display community lands and facilitate respect by investors and governments. The platform allows users to compare land tenure situations within and across countries, helping indigenous peoples and communities to protect their land rights.

Improved cadastral and land registration systems and tools. Seventy percent of the land in emerging economies is not registered and much of that land belongs to rural, vulnerable communities or indigenous groups (Cadasta 2017). A number of organizations have developed and compiled innovative tools that improve, accelerate and simplify cadastral and land registration systems and land readjustment processes, including the Global Land Alliance (GLA) and the Global Land Tools Network-GLTN.

To speed up the resolution of land disputes and strengthen land administration in forests, GLA’s Property Rights Index (PRIndex) assesses tenure security through household perceptions. GLA remaps and registers properties at the same time rather than following the typical practice of registering separately, and has begun work with the World Bank to explore options for expanding registration, mapping, and land administration of communal land tenure arrangements in forests.

Conventional land administration systems could not adapt to customary and informal land tenure, so the most important tool in the GLTN is the
Social Tenure Domain Model (STDM) which is designed to bridge this gap by providing a standard for representing ‘people – land’ relationships independent of the level of formality, legality, and technical accuracy. The STDM is software that allows users to create maps with overlapping territories – which is common in informal settlements – and integrate them into a customary cadastral system. The Gender Evaluation Criteria framework sets forth criteria to establish whether or not large scale land tools take into account issues of gender and how they can be made more gender-responsive. The Valuation of Unregistered Land is another pro-poor land tool that can be adopted across the globe. By calculating the true value of land, this tool helps to protect natural resources, and occupants’ right to keep their valuable land. While effective, cost is a limitation on the use of some of these tools.

Blockchain-based land registry systems may be an applicable technological innovation to help eliminate fraud and corruption. Alternative land titling systems that apply a more flexible and context-specific approach to the formalization of land rights in the South, taking into account politics and culture are also under development (Sjaastad and Cousins 2009). For example, based on case studies in Kenya, Meinzen-Dick and Mwangi examine ways that formalization can secure diverse claims based on a better understanding of traditional tenure arrangements, thus avoiding the risk of excluding legitimate claimants by formalizing property rights too narrowly (2018).

New organizations have recently arisen specifically to address data needs. The Cadasta Foundation was established to develop and promote the use of simple mobile and web-based tools and technology to help partners efficiently document, analyze, store and share critical land and resource rights information. By creating an accessible digital record of land, housing and resource rights, they help empower individuals, organizations, communities and governments with the information they need to make data-driven decisions and put vulnerable communities and their needs on the map. The Radiant Earth Foundation enables users to explore an unlimited number of Earth imagery-related resources, both public and commercial, via an open and neutral pathway. These are being used by a number of organizations to inform property rights initiatives.

Private sector tenure tools. The Interlaken Group is a network of leading investors, corporations, financing institutions, and NGO’s committed to expanding and leveraging private sector initiatives to secure community land rights. Landesa’s RIPL initiative focuses on socially responsible land investments by creating a set of standards to guide the private sector so that they can invest in land in an equitable way. A set of Private Sector Risk Analysis Tools has been developed by RRI and TMP Systems consultants for identifying areas at high risk of tenure conflict, and processes to help investors and companies counter that risk.
These five case studies illustrate different ways in which land and resource rights influence, and are influenced by, the effectiveness of initiatives that seek to sustain or restore sustainable landscapes.
Overview of the case studies

These five case studies reflect very different socioeconomic and socioecological contexts, but all involve negotiation or conflict among multiple landscape objectives and multiple stakeholders that affect formal or informal rights over resources.

The Makame Wildlife Management Area of Tanzania demonstrates an effective multi-stakeholder process in which innovations around rights promoted both economic development and ecological conservation, and the political dimensions benefitted local communities. In Quito’s Andean Bear conservation corridor in Ecuador, a REDD program created perverse outcomes due to networks of corruption around land rights which triggered legitimate landowners to accelerate deforestation. In the city of Detroit, Michigan (USA), non-local real estate developers are redesigning neighborhoods in a way that clashes with a successful multi-stakeholder movement of urban farming, food security and recreation.

The cases also demonstrate how external dynamics can affect property rights in landscapes. Integration into international commodity markets is shifting land tenure and livelihoods in the indigenous Maya community-managed landscapes in Yucatán, México, challenging their effectiveness for ILM. After the 2015 earthquake in Nepal, lack of land tenure proof and discriminatory practices against women and lower castes prompted government and organizational innovations to mitigate future risks to property rights arising from disasters.
Some issues only became evident when the community faced times of turmoil or crisis, as in Nepal following the 2015 earthquake. Together, the cases point to the need for better recognition and understanding by governments, local communities and civil society advocates of prospective trade-offs among local autonomy, conservation values, and market-enabled livelihood opportunities. Elements of surprise and surrender to forces that favor ownership and use of land for profit-making need to be tempered by deliberation and design, for example in the Yucatán, Andean Bear Corridor, and Detroit urban agriculture cases.

The cases highlight different aspects of use, control and authoritative rights, differentiated in Table 3 (page 36). Makame and the Andean Bear Corridor cases involved negotiated agreements among different stakeholders to modify direct use rights; In the Andean Bear Corridor and Yucatán cases rights of indirect use of forest ecosystem services were also modified. Conflicts among stakeholders over direct use rights from land and forests were present in all cases but Nepal. Indirect use rights were an important area of negotiation in wildlife management areas of Makame, under REDD rules in the Andean Bear Corridor and in the transition to private land control in the Yucatán ejidos. Even in urban Detroit, a core area of dispute was over enhancing the indirect value of community spaces for local actors versus making those available for commercial actors.

Most cases raised issues around authoritative rights of national governments to assign control rights to particular actors. In Makame, an innovation in authoritative rights authorized the designation of community wildlife conservation areas. In the Andean Bear Corridor, corruption in allocating land rights greatly complicated REDD negotiations over control rights. The Yucatán case explored the conservation implications of the shift in national policy for allocating land rights to favor commercial activity. The Nepal case identified weaknesses in capacity of the national government to secure allocated rights in the face of disaster.

But the central issues in these cases were around control rights. In Makame, wildlife management rights were reallocated; REDD participants in the Andean Bear Corridor in Ecuador needed to give up rights to forest clearing. Unclear rights to negotiate land-related transactions was a key stakeholder concern in all the cases, whether for sale of products or ecosystem services, such as carbon offset payments in Ecuador, or to receive disaster benefits in Nepal. Rights to exclude non-commercial users from use of the land were key in Detroit, as were right to exclude community users in Yucatán. In several landscapes, acceptance of external monitoring of land and resources, mostly around the state of ecosystem services (i.e. carbon sequestration and wildlife habitat) and compliance with agreements to protect them, was a key feature of negotiated rights.
These five cases suggest that a major role for multi-stakeholder landscape initiatives can be to provide a platform for defining, negotiating, claiming, or clarifying these control rights. This could include setting up systems of payments for ecosystem stewardship, revising zoning rules, and monitoring. These voluntary collaboratives could provide structured and inclusive mechanisms to help mediate questions and conflicts. Further, they can help refine solutions, not only about competing visions for landscape development, but also between competing management goals and frameworks proposed at local, landscape and state/national levels. A major element in implementing these frameworks is through decisions on authoritative rights. It thus seems essential that authoritative rights grant some control rights to landscape platforms to pursue negotiated solutions, at least where other rights-holders empower them to do so.

Facilitating advocacy and negotiation around property rights

The cases of the earthquake recovery in Nepal, WMA establishment in Tanzania, community urban agriculture in Detroit and exposure of land consolidation in the European Union (see Box 2) suggest how transparency, accountability, negotiation and resolution can be enhanced by civil society efforts to generate better information, communicate, and advocate for populations that suffer land insecurity.

Gaining rights to land can be a long-term process requiring a combination of technical competency and political sophistication. Dedicated NGOs and CBOs build trust and local organizational capacity, and engage in negotiations in the context of ambiguous or contested land rights, often over considerable periods of time.
Table 3 – Types of Land and Resource Rights Issues Raised in the Case Studies, based on Sikor, He and Lestrelin (2017) framework

<table>
<thead>
<tr>
<th>RIGHTS DISCUSSED</th>
<th>MAKAME WILDLIFE MGMT AREA, TANZANIA</th>
<th>ANDEAN BEAR CORRIDOR, ECUADOR</th>
<th>URBAN FARMING IN DETROIT, USA</th>
<th>EJIDOS IN YUCATÁN, MEXICO</th>
<th>LANDSCAPES IN NEPAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of direct benefits</td>
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<tr>
<td>Use of indirect benefits</td>
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<tr>
<td>Management</td>
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<tr>
<td>Exclusion</td>
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<tr>
<td>Transaction</td>
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<tr>
<td>Monitoring</td>
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<td>Definition</td>
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<tr>
<td>Allocation</td>
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The win-win promise of enterprise-based conservation: a case study of Makame Wildlife Management Area, Tanzania

The Tanzanian Wildlife Management Act of 1998 identified indigenous livelihoods as the cause of ecological degradation in rural Tanzania and sought to enable the win-win solution to economic development and ecological conservation promised by Wildlife Management Areas (WMAs). To implement the law, multiple organizations must interact, including local political organizations, regional and national government bodies in Tanzania, and international donors and NGOs. Though ecological outcomes of WMAs are mostly favorable, these organizations’ varied motivations and powers impact the social outcomes of WMAs in ways unpredictable at the outset. Through a discussion of these organizations’ roles in the formation and maintenance of the social order surrounding the Makame WMA - one of the oldest WMAs - this case study reveals the complex political and property dimensions of wildlife management in Tanzania. Due to the work of a dedicated NGO that supported the community in negotiating the terms for division of WMA profits, the politics were relatively favorable for communities party to the Makame WMA.

Background and context

WMAs are designated places in which use of wildlife and the natural resources on which they depend are subject to regulations and community monitoring. WMAs emerge from a regulatory action that can only be established by a community-based organization that has produced a land use plan for the WMA. These often include multiple villages surrounding a nationally-designated reserve or National Park. The WMA philosophy, sometimes called enterprise-based conservation, is used to couple social and economic benefits through conservation motivated by tourism (Kaswamila, Russell, and McGibbon 2007).

Throughout Tanzania, 19 WMAs have been established and 19 more are being planned as of September 2018. WMAs serve as wildlife corridors and buffers around national parks that step down so-called “exclusionary” (as-in exclusionary to residential development) conservation in national parks and other land regimes outside them. WMAs are multifunctional landscapes that allow economic and residential activity while maintaining sound ecological principles of resource use. Successful WMAs can serve as a model for such multifunctional landscapes, as long as the terms of land use and the distribution of benefits are balanced between communities, governments, and businesses.

However, unpacking the benefits and costs of community conservation in Tanzania is complicated. A key concept of WMAs is the win-win economic and ecological outcomes that could result from sustainable natural resource use. Success stories of behavior change to reduce or eliminate poaching following the implementation of WMA land use plans are common. However, the social benefits are not clearly linked to the
new laws. The process of forming a WMA involves collective action first taken by a group of villages to form a community-based organization. Engaging in collective action may itself be a measure of success and could be viewed as an institutional adaptation to pressures on the land from endogenous growth and outside encroachment by economic interests.

**Actors in the landscape**

Land management decisions in the WMA regions are divided among many actors, including village and district governments, the Authorized Association (AA) to run the WMA, and individual villagers. Though they are not always party to the WMA, pastoralists in the region, mostly cattle herders, move their herds across the less populated areas of the land to allow their cattle to graze while grasses elsewhere regrow. Over the course of the year, these mobile livelihoods require access to large areas, but at any given time, they may require only modest fields for grazing. This contrasts with agricultural activities, which are typically sedentary and situated in the same place throughout the year. Agriculturalists, as well as village-dwellers, also keep livestock, which can result in conflicts between the two groups when roaming cattle encroach on more densely populated areas. These relationships often preceded the establishment of a WMA.

Within the local politics of a WMA, villagers and leadership do not always agree on the proper distribution of benefits from tourism proceeds. Once a WMA has been established, the AA can choose to issue permits to tourism companies in
accordance with the WMA strategic plan. In the typical distribution of benefits, 35 percent goes to the central government and the remaining 65 percent is divided equally between the WMA leadership, the AA and the villagers. However, these ratios can be negotiated to reflect costs or the levels of participation of constituent villages. One common criticism of WMAs is that the revenues remaining after the AA and the central government have taken their share are too little to make it worthwhile for villages to engage in the WMA.

**The Makame WMA**

To tell the story of the Makame WMA at a landscape scale is to step back from the specific actors involved in the WMA itself and survey the broad institutional engagement in environmental management in the area. Organizations involved in land use planning in Tanzania include District Authorities, multiple villages, farmers and pastoralists, civil society organizations, and other development partners. Each of these groups responds to a different set of interests (Hart et al. 2014). Below, we provide a brief description of these actors to highlight diverse roles and responsibilities that affect rights to resources.

The United States Agency for International Development (USAID) supports a number of NGOs including the Honeyguide Foundations’ work to maintain a memorandum of understanding (MOU) with the AA in Makame to stop poaching, through a large-scale program to conserve endangered ecosystems in Northern Tanzania (Bell 2017; African People and Wildlife Fund 2016).

The Nature Conservancy, CarbonTanzania, and Maliasili Initiative are jointly operating a REDD+ program in the area to provide revenues from carbon offsets to the villagers in Makame. This program enables investors to buy carbon offsets through CarbonTanzania and, in doing so, generate income for communities in the area. The program relies on a third-party monitoring company called PlanVivo to monitor forest changes using satellite imagery.

Maliasili Initiatives is an NGO promoting good governance throughout Tanzania, including the five villages within the Makame WMA.

Multiple actors have a direct interest in the WMA. Five village-level governments and the Kieto District government have the power to produce land use plans and negotiate with the AA for resources from the WMA. More than 10,000 villagers can vote in local elections and support (or not) the WMA activities through this civic duty.

Ujamaa Community Resource Team (UCRT) has developed a program to secure fair contracts between community members and the tourism companies operating in the area. Contracts are struck with the AA as soon as the WMA is established. In some cases, the newly-established WMA tourism company can begin operating without sharing revenues with the community groups until the contract terms are agreed.

In 2016, Honeyguide Foundation worked with the Makame AA to establish an anti-poaching Memorandum of Understanding. To date, UCRT reports that significant advances have been made in establishing fair contracts between the community and tourism companies in the Makame WMA. Compared with other WMAs, this distribution of financial benefits is relatively favorable to the community.

Some WMAs are geared toward communal ownership and management of natural resources on village land and surrounding areas, while another model of WMA links large land appropriations for private investments in tourism. The villagers in the Makame WMA, with support from NGO community, seem to have resisted an attempt at the latter through strong contract negotiations. However, progress in this direction took significant effort from multiple parties.

**Innovative Strategies: Nested Levels of Accountability**

Continued community planning and engagement, as happened in the Makame WMA, resulting in incremental development of capacity for collective
action as well as physical infrastructure, can lead to community empowerment. The story of Makame up to this point follows the model of cumulative participation in state- and community-based planning. This model could, according to Beard’s framework for social learning and radical planning, increase community resilience and the ability for collective action planning in the community to reshape the relationship with the land, particularly for marginalized groups in the area (Beard 2003).

Civic engagement among villagers and local government appears to be improving vertical accountability between levels of governance and leading to more equitable distribution of benefits among groups involved in wildlife management. Capacity-development programming from groups like UCRT could, over time, contribute to increased agency in the process if villagers gain the skills and ability to negotiate for themselves. However, deep engagement from NGOs could also create a dependence on outsider interventions to equalize power dynamics and advocate for fair distribution of benefits.

While there seems to be some progress toward social and ecological justice in the Makame WMA, it is not clear if the contracting approach could serve as a model for other WMAs. The effort to establish fair contracts has been built up over years of support from NGOs and international donors. While other WMAs follow a similar process, these developments within the Makame WMA resulted from a unique combination of programming and support for contract negotiations. However, the issue of benefit sharing is part of an ongoing discussion to address the social outcomes observed in existing WMAs. The number of operating WMAs will double in the coming years, and the negotiation of fair contracts can ensure that these WMAs result in equitable distribution of benefits.
Green grabbing in biodiversity hotspots: a case study in Quito’s Andean Bear Corridor, Ecuador

**Background and context**

Since the 2008 economic crisis, the issue of ‘large-scale land acquisitions’ (Deininger et al. 2011), more commonly known as ‘land grabbing’ (Borras et al. 2011; Wolford et al. 2013), has emerged as a major challenge for realizing the practical implementation of the integrated landscape management (ILM) vision. One type of land grabbing called ‘green grabbing’, the appropriation of land and resources for environmental ends, is a related process of serious international concern (Fairhead et al. 2012). One form of green grabbing is the illegitimate appropriation of property rights to collect ‘carbon credit’ payments in the context of REDD: Reduction of Emissions from Deforestation and Forest Degradation, a critical strategy in the Paris Climate Agreement.

Green grabbing is a major impediment to land tenure security and forest governance precisely with those marginalized forest-based communities that REDD is supposed to benefit by providing an incentive/compensation for forest conservation. In addition to social justice issues, environmental impacts are particularly serious within conservation corridors located in biodiversity hotspots (areas of global conservation priority) where increased deforestation can interrupt wildlife habitat connectivity which results in fragmentation and defeats the conservation purpose of the corridor. This was exactly the case in Quito’s Andean Bear Corridor in northwest Ecuador, as we will demonstrate in the case that follows.

**Socio Bosque and REDD in Ecuador**

Socio Bosque (PSB) is a national conservation incentive program established by Ecuador in 2008. Although created in the context of REDD, it...
Map showing location of community, private and state protected conservation areas in the Choco Andino/ Northwest Ecuador Biological Corridor

Legend translation:
(Simbología Temática, from top to bottom)
Protected Areas
Protective Forests
Community Forests
Private Reserves
Community Water Reserves
B.P. Paso Alto

FIGURE 4
was formed independently with national funding and is now considered among the global leaders of ‘REDD readiness’. Despite important critiques (Moreano 2012; Krause and Loft 2013), PSB is generally considered a successful model (de Koning et al. 2011; Collen et al. 2016) and is based on a previous pilot experience (Wendland 2008). Now it is well positioned to access resources as REDD moves beyond the pilot phase. However, in the case of the Andean Bear Corridor, underlying issues of corrupt land tenure arrangements undermined the impact of an otherwise promising REDD program.

‘Green grabbing’ in the Andean Bear Corridor

Quito’s Andean Bear Corridor (ABC) is an area of cloud forest located in the western range of the Andes in northwest Ecuador. The ABC is an ecological corridor between the Mindo Forest Reserve and the Cotacachi-Cayapas Ecological Reserve that provides habitat connectivity for the Andean or ‘spectacled’ bear (Tremarctos ornatus) as an umbrella species representing the region’s exceptionally high biodiversity. This area is within the Tropical Andes Biodiversity Hotspot, characterized by the world’s highest plant, bird, and amphibian diversity and endemism.

The ABC region was inhabited by the Yumbo people until the eruption of the Pichincha volcano in the late 1660’s. In the 1880’s repopulation of the region began with the arrival of colonists seeking land and freedom from the haciendas in the area of San José de Minas. The colonists’ dominant land use and livelihood strategies were timber extraction, subsistence agriculture and cattle-raising, with sugarcane as the chief commercial crop. Colonization and deforestation intensified after the Agrarian Reform and Colonization laws (1964, 1972) due to land clearing instituted as a requirement to demonstrate possession for subsequent land titling. Today over half of the region has been converted to monocultures, with land degradation exacerbated by the steep topography and high rainfall.

By the late 1980’s and 1990’s new roads, illegal logging, land trafficking, and the national economic crisis were factors that accelerated the rate of deforestation. Also, during this time, the region’s first conservation areas were born (e.g., Los Cedros, La Florida, Maquipucuna; see Figure 4). In the area of this particular study, two local NGOs—Fundación Cambugán (FC) and Fundación Allpa (FA)—united with local communities to halt land trafficker invasions (1999-2000) and to obtain the subsequent declaration as a forest reserve (Bosque Protector Cambugán-BPC) by the Ecuadorian Ministry of Environment (Ministerio del Ambiente de Ecuador-MAE) in 2001.

Since then FC has led community organization and land titling processes in the BPC. In 2002, with funding from Rainforest Concern, FA began working with the Asociación Agroartesanal de Caficultores ‘Río Intag’ (AACRI) in the adjacent Paso Alto forest that lead to its declaration by the MAE as a protected forest reserve in 2010 (Bosque Protector Paso Alto-BPPA). Concurrently, AACRI and FA were also collaborating with the parish government of Selva Alegre (Otavalo) and communities in a similar process to have the neighboring Quinde forest declared as a protected forest reserve.

The proposal for Quinde was presented to the MAE (Imbabura provincial jurisdiction) near the same time as Paso Alto, but was not approved. Years later in 2014 the area was discovered to be a concession to a private party by Socio Bosque. MAE’s ‘Forest Partners’ conservation incentive program, covering not only Quinde, but also large portions of Taminanga, Cambugán, and Paso Alto (reserves previously declared), totaled over 6000 hectares. Meanwhile, in 2013 the ‘Andean Bear Corridor’ (65,000 hectares including 10,000 hectares in Cambugán/Paso Alto) was declared by resolution of the Municipality of Quito (Distrito Metropolitan de Quito-DMQ) to protect the area’s emblematic species and associated biodiversity.
After discovering the concession by Socio Bosque that affected three legally-declared forest reserves and dozens of property owners within the recently declared Andean Bear Corridor (ABC), further investigation began immediately. In 2005 a company named ‘UCPEIN’ had purchased 100 hectares in the area of Quinde (Otavalo County, Imbabura Province). The same year UCPEIN requested and obtained a judicial inspection to determine the exact boundaries of the property. The inspectors’ report concludes: “The plot in question presents a slight change of location as its area is not 100 hectares but 9165 hectares.” After the report was reviewed by the judge, UCPEIN registered it with the new boundaries at the Otavalo Municipal Property Registry and, in October 2005, sold it to a woman (MVT) who, coincidentally, is the mother of UCPEIN’s managing director. Thereafter, MVT registered the deed with the Programa Socio Bosque (PSB) which accepted her as a beneficiary of the program based on an inspection that found 6000 of the 9165 total hectares had primary forest eligible for inclusion. From 2009 to 2014 MVT received $30,400 annually from PSB.

Approximately 200 families are affected by this problem, the majority of whom hold legal deeds and have been paying property taxes to their respective municipalities, Otavalo and Quito, since long before 2005. In December 2014 legal counsel was contracted to represent the affected families and local government to file a civil suit to annul the false land title. A complaint was also filed with PSB, and based on an investigation by MAE, the agreement with MVT was terminated on 9 June 2015. MAE confirmed that MVT had violated the private property rights of legitimate owners and therefore demanded that all funds received by MVT be returned to PSB.

**FIGURE 5**
The Mindo Cloud Forest, in the Andean Bear Corridor, Ecuador. Adobe Stock.
In summary, the following are among the more notable irregularities in this case:

1. According to Ecuadorian law, a surveyor’s report is not sufficient grounds to adjust property boundaries. Rather it only marks the start of a legal process leading to a judge’s ruling, which is the necessary supporting document to register the deed with the new changes after it is registered with the cadastral area of the municipality. In the case of MVT, a formal judge’s ruling was not received and the only document that was able to be used to file a deed with the Otavalo Municipal Property Registry (OMPR) was a surveyor’s report.

2. The OMPR shows that MVT owns a total area of 80 hectares and that the annual property tax is $20. When the land area was adjusted up to 9,165 hectares, the taxes were not and MVT continued paying only $20 annually. Meanwhile, affected landowners continued paying their taxes as normal.

3. The MVT land title is located in the Parish of Selva Alegre, County of Otavalo, Province of Imbabura. But according to the map, 80 percent of the MVT property is within the Parish of San José de Minas, County of Quito (DMQ), Province of Pichincha, to which both the protected forest reserves of Cambugán and Paso Alto also belong. The DMQ Property Registry in Quito has no record of the MVT property within its jurisdiction.

4. Although it is conceivable that PSB might miss the first two irregularities mentioned above, it is not so for the third. In addition to being listed in the MAE’s national registry of protected areas, they have detailed information on land tenure in Cambugán and Paso Alto based on the studies required before declaring them as protected forest reserves in 2001 and 2010, respectively. In the case of Cambugán, a land legalization process has been underway with the participation of MAE since the year 2000.

After a costly three-year process, the case for annulment was presented in March 2018 and is currently awaiting judgement. During this period of tenure insecurity, deforestation has increased significantly. Many people in the communities of Cambugán, Paso Alto, and Quinde who were willing to bet on the idea of “community-managed forest reserves” and have participated toward this end for almost twenty years, have given up in disillusionment. Socio Bosque does not address the root causes of deforestation nor exempt PSB-areas from mining concessions that jeopardize communities throughout the nation. It has, however, afforded a new opportunity for land traffickers to capture ‘carbon payments’ in collusion with corrupt government officials.

The forthcoming judgement is expected to annul the false land title and restore the property rights of the affected parties. Unfortunately, the parties do not possess the economic or political means to obtain compensation for their losses or justice for those responsible.

The chief drivers of deforestation in Ecuador, as in most of the world, are from economic pressures originating from outside the forests. Funds for forest protection and management are dwarfed by investment in projects to destroy them. Thus the ILM strategy of collaborative, multi-stakeholder planning and management at landscape scales should happen before, not after, REDD and other such schemes are imposed without the Free, Prior, and Informed Consent (FPIC) of the indigenous peoples and local communities that will be most affected.
The City of Detroit is well-known for its urban farming movement, which was created by Black community leaders who made use of vacant land in the face of extreme poverty and structural racism. This movement was spearheaded by Detroiters for Detroiters who have built a network that includes government officials and policymakers, non-profit organizations, churches and schools, and a variety of other stakeholders that share a clear vision of feeding Detroit, overcoming racial inequality, and building community. The gardens serve multiple purposes, including teaching younger generations about farming, creating jobs, feeding residents, and offering a safe space of community activities. Detroit’s economy and population declined for several decades: in part due to urban gardening it is now reviving.

Unfortunately, non-local real estate speculators and entrepreneurs are trying to capitalize on this hard-won recovery. These entrepreneurs are buying hundreds of parcels of land—some of which are occupied by urban farms—and redesigning neighborhoods in a way that clashes rather than complements with the current fabric. City officials support community agriculture and recognize these issues, however, they are financially constrained and believe private development can help Detroit continue its economic growth. Activists point out that selling the property rights to out-of-towners that do not want to collaborate with the community is unsustainable and reinforces structural racism. This case study highlights the importance and challenges of integrated landscape management in the Global North, and specifically, in shrunken cities where government officials struggle with balancing economic development and multi-stakeholder community engagement.

Background and context

In the 1950s Detroit buzzed with two million residents, but as automation replaced factory-workers and job opportunities declined, so did the city’s population. Between 2000 and 2010 the city lost 25 percent of its residents and in 2012 the population bottomed out at 700,000. According to Sara Safransky, “Detroit has become the exemplar of the shrinking cities phenomenon and a test case for how municipal governments [are] challenged by the management of infrastructures built to support large populations.” Today, city officials have deemed 100,000 lots or one-third of Detroit’s land as “vacant” or “abandoned,” but residents collectively maintain much of this land as parks, theatre space, and for food production (Safransky 2016).

Additionally, the city is plagued with structural, racial, and economic inequality. In the 1960s, about 70 percent of the city residents were White and 29 percent Black, but, as factory jobs dissolved, White residents filled the suburbs and Detroit became an increasingly Black city (Williams 2012). Today, approximately 85 percent of residents identify as African American, 60 percent of city residents live in poverty, and over 50 percent are unemployed (Data
Driven Detroit 2010). In 2010 the median income was $28,000 while residents in its neighboring suburbs earned upward of $50,000 (US Census Bureau 2010). Additionally, because of the shrinking population, the city has had to disconnect services including electricity, water, and trash pick-up from specific areas and typically chooses the most impoverished neighborhoods (Williams, 2012). The history and present circumstance set the stage for property rights issues including land grabs and public-private conflict, which intersects at urban agriculture. As the city is slowly making an economic comeback, these issues are at the forefront for city planners, entrepreneurs, and community enthusiasts.

**What’s the story?**

From Motor City to Motown, and presently known as Grow-town, Detroit is admired for its urban farming movement, which was founded during a time of poverty, food insecurity, and lack of opportunity. In the face of these challenges local, predominately Black, residents started farming as a means to feed their family, and generate income; residents also made use of “vacant” land—legally and illegally—by making claims to it as a means to cultivate communities that felt abandoned. In 2012, the city had 1,350 registered community gardens, which excludes a least a thousand more unregistered family, school, and church gardens (DFPC 2012). Urban agriculture also provides job opportunities and teaches skills to residents. The Oakland Avenue Farm, for example, provides 13 full and part-time jobs and trains residents to cook and grow food (Perkins 2017). Recently,
private business models have challenged urban agriculture’s ability to boost local economies, claiming that real estate development is a more productive model.

Detroit is faced with two models of urban agriculture: The first is the community-driven food sovereignty and poverty alleviation model, which is upheld by a network of community organizations that work together to build a resilient food system. The second is the capitalist-development model, which broadly encompasses private entities that are investing in large areas of land and seeking to use urban agriculture to attract new residents and revive empty neighborhoods. Race is intertwined in this conflict as a majority of Black residents founded the first model, and White Detroit transplants spearhead the development model. Many Detroiters approve of both models. However, some residents find the development model to be extractive and fear gentrification will further exacerbate inequalities while undermining the goals of the original urban farming movement.

Many trace community gardening efforts to the 1980’s when a group called the Gardening Angels began planting flowers and gardens on vacant lots as a way to combat crime and to teach the younger generation about agriculture (Safransky 2016). Over the course of 40 years this has transformed into a food sovereignty movement, which is held together by dozens of organizations that are working together to rebuild Detroit. The movement includes Food Plus Detroit, Detroit Community Markets, Detroit Food Policy Council, Regional Resource Hub, and Keep Growing Detroit, and many farms, garden, schools and faith organizations, which are already using landscape approaches for integrated management.

In 2017, Keep Growing Detroit and its Garden Resource Program engaged with 1,547 gardens and 36 partners in food sovereignty – their programs reached approximately 23,348 Detroiters (2017 Annual Report, Keep Growing Detroit). The group attended 82 community meetings and responded with a range of activities including farm education for adults and youth, soil testing, providing seeds, and beekeeping classes. According to their website, Keep Growing Detroit is constantly learning and adapting its programs to better serve Detroit community demands.

The food sovereignty network is proud to be developed for Detroiters by Detroiters, and has created jobs in neighborhoods where few existed, and created shared safe spaces for the community to interact. The organization sets common goals such as growing enough food to feed 2 percent of Detroiters, and it also plans new projects to complement existing land use (Keep Growing Detroit, 2017). The network works with city planners and policymakers to ensure the long-term success of the projects. This model has great support around the community. However, land tenure has become more insecure as young (mostly White) entrepreneur-investors are buying up large areas of land, which is being embraced by the city since it is stabilizing real estate markets (Safransky 2016).

The Michigan Urban Farming Initiative (MUFI) is an example of an organization using the capitalist-development model. MUFI is an all-volunteer nonprofit organization focused on building a three-acre agricultural campus in the North End neighborhood of Detroit. Founder Tyson Gersh is trying to develop an agri-hood in the North End, which he believes is ripe for gentrification (Perkins 2017). Gersh also owns houses in the neighborhood and is hoping the agri-hood will increase revenue for his property. MUFI is using urban agriculture as a marketing strategy with the goal of increasing the population and revitalizing the entire community. The community appears mixed on his approach. Some long-time residents believe that there is a need for housing development and room for both agriculture
The maps highlight the complementary relationship between residential land use and urban farms and gardens.

FIGURES 7 AND 8

The main critique of Tyson is that he is competing rather than collaborating with surrounding farms. For example, on Saturdays, the Oakland Avenue Farm—which as noted above provides jobs and other services for residents—has its weekly farmer’s market where they offer low-cost produce for residents. Seemingly in disregard to this market, Gersh offers free veggies on the same day just a few blocks away (Perkins 2017). Gersh can offer free produce because he does not have paid employees; instead, he relies on volunteers and donations. Since 2011, Gersh has had help from around 10,000 corporate volunteers and received donations from businesses such as General Motors, Stanley, Black and Decker, and Miracle-Gro (MUFD). Additionally, Gersh has distributed 50,000 pounds of fruits and vegetables for free to over 2,000 households within two square miles of the farm (MUFD). Critics argue that charity makes people dependent and does not address the structural issues of poverty and inequality, but Gersh believes that he is doing a public service by offering low-income or no-income residents access to free produce.

The Future

Key to integrated landscape management is who gets what, how, why, and by what processes. City officials must regularly decide which residents get access to services and who get left behind, and these decisions, unfortunately, are often determined by economic outcomes for the city rather than democratically or through a landscape approach.

As a shrunken city with a tight budget, Detroit can benefit from the capitalist-development model to increase city revenue and to rebuild its dilapidated models, but others who compare his work to neo-colonialism feel that he is capitalizing on the urban agriculture movement (Perkins 2017).
FIGURE 9
The Oakland Avenue Urban Farm. In addition to agriculture, the Oakland Avenue Urban Farm offers a community house, farm store, performance stage, public art space, and a farmer’s market.

FIGURE 10
MUFI Agricultural Campus
infrastructure, but these projects are often at the expense of community initiatives. For example, in 2016, the city council voted to sell finance-mogul John Hantz 180 acres or 1,900 parcels for $520,000: just $279 per parcel (Safransky, 2016). The city justified this decision because the land was titled as vacant, despite the area’s active use by urban gardeners and community-based organizations. The community groups protested the acquisition stating that they should have first right to purchase and would pay $279 for select parcels (Safransky 2016). Detroit, unfortunately, needed the economies of scale for the deal to be feasible and could not offer the community members the same deal as the real estate developer. The term ‘land grab’ is what scholars and activists have identified as rapid, large-scale land acquisitions by corporate and state entities for agricultural production (Fairhead et al. 2012; TNI 2013). The examples of Hantz and Gersh can unmistakably be defined as a land grab. Luckily, there is hope that Detroit will also support community-based initiatives.

The Detroit Fitzgerald Revitalization Project is a promising new initiative led by the City of Detroit “to stabilize and strengthen a neighborhood by transforming publicly owned vacant land and buildings into community assets” (Fitzgerald Revitalization Project, ND). The project is working with residents and community leaders to holistically develop a vision for 128 publically owned parcels in the Fitzgerald neighborhood with the goal of maximizing benefits for its residents. The project began in early 2018 and won an award from the American Society of Landscape Architects for “inspiring equitable and innovative landscape-driven approaches to revitalization in Detroit neighborhoods” (The Trust for Public Land, ND). This project shows that city officials are also making large-scale efforts to ensure that the historical and structural disenfranchisement are not reinforced.

**Conclusion**

This case study presents a snapshot of Detroit in a specific moment, but the circumstances are found across the U.S. “Rust Belt” and in other places where revitalization has followed an urban decline. This case study highlights the importance of applying the concept of ILM worldwide to build more resilient and equitable communities for future generations.
Commodity market influence on ejido land tenure regimes and the impact on forest cover across Yucatán, México

Despite the conservation and livelihood potential of community-managed landscapes (Harvey et al. 2008), indigenous community-managed land tenure systems in many locations worldwide are shifting towards individualized and privatized systems (Kelly et al. 2010; Grimm & Lesorogol 2012; Loehr 2012). This is largely due to the integration of community-managed lands into national and global commodity markets for the production of agriculture, livestock and forestry products. Such shifts can initiate a process of landscape change that potentially hinders the conservation and livelihood effectiveness of community-managed landscapes (Jose 2012).

This case study highlights the effectiveness of indigenous Maya community-managed landscapes in Yucatán, México, and some of the challenges these communities face due to political-economic forces on the shift in land tenure and livelihoods. Specifically, the case study focuses on ejidos (a type of community landholding), their integration into commodity markets and the associated shift in land tenure. The case study is based on dissertation research at Cornell University (Lawrence 2019).

Background and context

The State of Yucatán is embedded in a dry tropical forest region with diverse vegetation and a species-rich landscape (Porter-Bolland et al. 2015). The state also is part of the Mesoamerican Biological Corridor, a global biodiversity hotspot with unique and diverse indigenous cultural heritages.

For nearly a century, indigenous Maya communities in the State of Yucatán have managed much of the state's forests and biodiversity under México's ejido land tenure system (Figure 11). Ejidos are a type of community landholding that the federal government created during the early 1900s, through Article 27 of México's constitution, to support small-scale subsistence agro-forestry and to redress long-standing land and natural resource inequality (Perramond 2008; Barnes 2009). There are approximately 700 ejidos in the state of Yucatán, comprising 56% of all land and 64% of all forested lands in the state. Most ejidos in the state are under the primary stewardship of Maya people (INEGI 2016; Trench et al. 2017), and these communities have been historically characterized by traditional land use and subsistence agroforestry livelihoods (Sánchez-Sánchez et al. 2015).

As a resource management institution, the ejido land tenure system determines the relationship between the Maya people of the Yucatán and their lands (Barnes 2009; Spalding 2017), which is intricately tied to their culture (Berkes 2012). For the Maya, land tenure often follows cultural norms and values that have an origin in the use of the land over many generations. In turn, associated livelihoods involve detailed knowledge of local ecological conditions, plants, animals and interconnecting ecological processes that culminate in complex systems for categorizing ecological characteristics and patterns (Kassam 2009). Consequently, land and resource management can be quite sophisticated, extensive
and adaptive (Berkes 2009), often involving low-intensity inputs with little mechanization, multiple and intermingled use, and rotational strategies. In these cases, traditional practices can result in diverse habitats, ecosystems and landscapes (Ribeiro Palacios et al. 2013). Such landscapes tend to include extensive ecological gradients, diverse patches and high quality habitat with a wide array of species and considerable biodiversity (Fischer et al. 2012). In turn, traditional ejido-managed lands often have high levels of biodiversity, especially in the state of Yucatán, due to a mosaic of multiple-use forests and small-scale subsistence agriculture (Robson & Berkes 2011).

**Political-economic forces of ejido landscape change**

Despite the subsistence livelihood and conservation value of ejidos, Article 27 was significantly altered in 1992 as part of México’s push for market liberalization and increased integration into the global economy. Specifically, the creation of new ejidos was discontinued; land parceling and legal certification began; and restrictions were eliminated, allowing ejido lands to be rented, sold, bought or leased (Loewe & Taylor 2008; Perramond 2008; Smith et al. 2009). Overall, the changes to Article 27, specifically the provisions that ejido common use lands could be divided and managed among individual farmers of the ejido, enabled and promoted a shift in land tenure strategies, away from community-managed and toward individually-managed lands.

Meanwhile, México’s agricultural food system, which conspicuously supported the ejido land tenure system (Galvan-Miyoshi et al. 2015) also was restructured in the mid- to late 1980s. Prior to the 1980s, México’s agricultural food system was based on a state-led governance structure involving locally-based and small-scale municipal markets, while the federal government exercised control over food prices and agricultural extension services. But, with changes to agrarian policies in the late 1980s, the governance of the agricultural food system has shifted towards dominance by large foreign transnational corporations, bringing about rapid expansion in large-scale and capital-intensive production systems (Biles et al. 2007), and resulting in a fivefold increase in agricultural exports between 1990 and 2010 (UNCTAD, 2013).
The changes to México’s ejido land tenure and agricultural food systems, in the 1980s and 90s, were intended to replace the traditional community-managed and subsistence-based agro-forestry system of ejidos with a market-efficient and modern agricultural land system (Herrera Rodríguez 2012). In turn, this new system was envisioned as able to attract higher levels of foreign investment, particularly large-scale agriculture (Spalding 2017). These changes have reshaped the State of Yucatán’s landscapes.

Following the national trend, livelihoods and land uses in Yucatán are shifting toward market-oriented activities (Radel et al. 2010). For example, between 1991 and 2007 pasture land for commodity production increased 36% across the state and there was a sixfold increase in agricultural exports (INEGI 1994; 2007a). At the same time, since the changes in Article 27, more than 500 ejidos across the state have formally apportioned and legally designated at least some of their lands as parcels among individual ejido farmers (INEGI 2016). Moreover, roughly one-third of all ejido lands in the state are now individually parcelized.

Lawrence et al. used spatially explicit statistical analyses to explore the influence of these distant political-economic forces and commodity markets on shifts in ejido land tenure and the impact to forest cover (2019). Commodity production for distant markets was strongly related to parcelized ejido lands, which in turn are often deforested. Conversely, community-managed lands, which traditionally involve subsistence-based agroforestry, are much more likely to be densely forested. Overall, the results show that recent deforestation of ejido lands across the state is, at least partly, the result of shifting land tenure and livelihoods due to the increasing presence of commodity markets.

Ultimately, in the State of Yucatán, what began as an engagement with commodity production, especially in previously more isolated regions, appears to have manifested as the disruption and alteration of Maya ejido land tenure strategies, combined with a shift in livelihoods away from subsistence and toward market-oriented activities (Rudel et al. 2009; DeFries et al. 2010). Much of these commodity-producing activities supply distant markets. For example, habanero chilis are largely produced for the rest of México and, in recent decades, for export to the United States and Japan (Biles et al. 2007). Similarly, much of the beef produced in the State of Yucatán is sent to other regions of México. Recently, much of the deforestation in the state has involved conversion to pasture lands (Díaz-Gallegos et al. 2010).

**Conclusion**

Overall, in the State of Yucatán a web of connections has contributed to an accelerated transition from commodity production for distant markets, through shifting ejido land tenure, and extending to deforested ejido lands (Lawrence et al. 2019). To stave off global biodiversity loss and diminished livelihoods, affected communities will need to prevent the uncontrolled privatization of collective lands and resources. It will be essential to better understand and address larger, often distant, political-economic driving forces and global-to-local pathways that ultimately impact landscapes, biodiversity and conservation.
This case study looks at land rights and policy in the period following a natural disaster, when the cracks in the land rights system were exposed. The 2015 earthquakes in Nepal left over 8,000 people dead and countless people displaced. We will look at the problems people in Nepal faced because of a lack of land tenure proof and discriminatory practices that harmed women and people from lower castes who sought assistance following the earthquakes. We examine the government and organizational response to this crisis, including digitization of information systems, as a potential solution to decrease the likelihood that the same problems will occur again. The case can be used to draw lessons to help other governments protect land and its citizens after a disaster.

**Background and context**

Nepal is a landlocked country in South Asia, bordered by China to the North and India to the South, East and West. It is primarily an agricultural country, with 66 percent of its population engaged in some form of agriculture, typically subsistence agriculture (FAO 2018). Farmers typically grow more than one crop to protect against crop failures and changing climates and to feed their family a relatively diverse diet. Farmers often intercrop pumpkin and maize in the wet season while leaving the field fallow in the dry season. A separate field is typically used for rice intercropped with soybean in the wet season. Livestock is another important part of Nepal’s socio-ecological system. People often have goats, water buffalo, yak, and chickens that they sell for cash or use for home consumption. They also use and sell animal products such as milk, butter, yogurt, fresh cheese, and eggs. Farmers also use the animals for farm labor.

**Socio-ecological and land tenure challenges in Nepal**

Even with supplemental income from livestock, many families produce just enough food to feed themselves without much leftover to sell. This is partially due to low yields and lack of access to markets because of Nepal’s underdeveloped infrastructure. There are many coping mechanisms rural farmers use to supplement their income, such as seeking employment abroad. In one report, 32 percent of married women stated that their husbands have moved abroad to seek employment (CARE 2016). The farming system in Nepal typically includes the use of a community forest to gather fodder for animals and fuel for cooking, and occasionally foraging to supplement the diet. This operates through the Forest Act of 1993 and the Forest Policy of 2000 and gives every villager in the village equal rights to the forest. There are currently 18,000 officially designated community forests in Nepal, representing 18 percent of the country’s forests (Magrath, et al. 2013).

Legislation to promote sustainable land management, combat land degradation and
facilitate sustainable practices have been initiated by the government but are rarely enforced. The Land Measurement Act of 1962 aimed to identify land for various uses, although most of these uses are no longer relevant. The 1997 Environmental Recovery Act requires an assessment of environmental impact of any activity that would change the usage of land, but this has not been implemented by either national or local authorities. An amendment to this law promoted the use of zoning maps, but this also went unimplemented (CARE 2016). Due to the lack of enforcement and application of these policies, many people are located in areas that are prone to disasters; built areas are established on arable land, and sensitive areas are disrupted by various land uses (CARE 2016).

Land tenure not only is an issue in and of itself, but exacerbates and underlies all the aforementioned issues. The unequal distribution of land has caused vulnerabilities in food security, land management and livelihoods throughout the population.

After the Nepal Civil War ended in 2006, policies were created to abolish inequalities in land, especially for landless women and lower caste people. Even though some of these policies, like the Citizen Act of 2006 that aimed to help people without official land titles but ancestral claim to the land become verified through testimonies, seemed to assist in land tenure, many of the policies only worked in theory. They were not enforced due to a lack of technical and financial capacity, political tensions and a cultural climate that did not support the policies (CARE 2016).

In contrast to policies that have been established to promote sustainable landscapes and help the vulnerable achieve land tenure, there are also policies that act as major barriers to achieving these goals. In Nepal, it is a law that only Nepali nationals can own land, and in order to prove citizenship, you need a citizenship card. About 20 percent of the population does not have one of these cards and cannot prove their citizenship, and therefore cannot own land, even if they have been using a plot of land without contestation (CARE 2016). This is important because without ownership of land, land grabbing can occur, community land planning is more difficult, people are less likely to invest in sustainable practices in their land, and encroachment on protected areas increases. Women and people from lower castes are significantly less likely to possess citizenship cards (CARE 2016). The application process to
obtain a citizenship card is tedious, complicated, and inaccessible for many, and discrimination often occurs against women and people of lower caste who are denied cards by family members or government officials. In addition, once citizenship is established, registering land is also a challenge. Only 48 percent of owned land is registered in Nepal and most people, 75 percent of men and 90 percent of women, do not even know what documents are required for land ownership (CARE 2016). There are also policies that deal with indigenous groups and land tenure, but there is no evidence of their efficacy.

**Land tenure changes after the Gorkha Earthquake**

Nepal experienced a major earthquake on April 25th, 2015. The earthquake, 7.8 in magnitude, was centered about 82 kilometers northwest of the capital, Kathmandu. On May 12, a magnitude 7.3 aftershock struck the still reeling country. The impact included nearly 9,000 fatalities, 23,000 injuries, 500,000 homes destroyed and 270,000 homes damaged (USGS 2015). The epicenter of the initial earthquake was near the city of Gorkha, in the upper-middle hills, which now lends its name to the disaster. The Gorkha earthquake greatly exacerbated pre-existing issues with land-rights and land tenure and revealed some major failings in Nepali policy on land rights. However, some organizations, such us CARE, Oxfam, and Nepal’s Community Self-Reliance Center, saw an opportunity to help Nepal rebuild more strongly, including by focusing on land tenure.

Immediately after the earthquake, many people sought government assistance to help them rebuild or relocate their lives, homes, and property. However, in order to receive earthquake assistance, one had to apply with a citizenship card. This excluded a large part of the population, especially the most vulnerable, from receiving assistance. Women whose husbands were absent or abroad often did not have the required documentation to receive assistance, and people from lower castes who had not previously established citizenship were also left out. Squatters or tenants of land were also denied assistance (CARE 2016). Furthermore, the problem also affected registered citizens who could not locate their documents after the disaster, complicating this process further. The government recognized that lack of citizenship cards or land ownership documentation was a problem and agreed to allow local government officials to override documentation requirements. This led to nepotism and corruption, as there were no standards set for this process.

This lack of systematic process and further marginalization of women and lower caste people increased the risk that the displaced population resettled on land that was neither safe, nor arable, nor secure for future land tenure. This perpetuated the cycle of poverty, food insecurity, livelihood insecurity, and land degradation of these marginalized people. It also is a microcosm for the greater issue of the lack of land tenure in Nepal due to discrimination, poor government functioning, little oversight regarding policy, and poor enforcement of law.

**Innovative strategies: Community Self-Reliance Center**

The Community Self-Reliance Center (CSRC) is a non-profit organization that has been working on land and agrarian rights in Nepal since 1993. They strengthen community organizations, educate communities about their land rights, promote land and agrarian reform, and advocate for policies that are pro-poor and inclusive at both the government and communities levels (CSRC 2018). After the earthquake, CSRC partnered with CARE Nepal, who had been working to address poverty in Nepal since 1978 and was delivering emergency assistance to earthquake-impacted communities. The two organizations teamed up to create a set of standards for reconstruction programs and for further programming in favor of equal land rights as a guide to rebuild stronger. The
recommendations focused on various stakeholders including international, national and local NGOs; government officials; the private sector; and donors (CARE 2016). The document containing the set of standards also contains a How-to Guide that explains procedures to obtain citizenship status, land registration, family ID for squatters and the role of stakeholders in each step.

The recommendations detailed the possibility of new post-earthquake policies. For example, the CSRC and CARE recommended that the government offer subsidies for squatters to provide them with shelter while they wait for land redistribution to be processed. This would help avoid relocation onto unsuitable land (CARE 2016). It is beyond the scope of this case study to detail all of the recommendations, but they include: ensure the transparency of grant disbursement, address the gaps of the reconstructions policy, seize the opportunity for land use planning, make rights effective in practice, and support civil society’s causes (CARE 2016). Recovery from the earthquake has been slow at best, and the results of these standards will likely not be seen for years to come. Nepal faces many obstacles to rebuilding itself, but organizations like CSRC and CARE are giving the vulnerable a voice to strive for a stronger, more equitable land rights system.

The case of Nepal and the Gorkha Earthquake is an example for other countries who experience natural and human-caused disasters. It is important to effectively respond to the disaster but also to understand the complex cultural and political climate that impacts land tenure before
and after a disaster (Caron et al 2014). This will help reduce the impact of land-tenure related issues after a disaster and build resilience for the future. In addition, it is not enough for government officials to simply create a policy that responds to a disaster. These policies might have good intentions, but might not function in practice, especially in rural areas that are underserved. A voice for the vulnerable, such as CSRC, that holds government officials accountable at all levels and that advocates for the poor, is critical to mitigate the impact of poorly-functioning policies before and after a disaster.
Integrated landscape management (ILM) involves long-term collaboration among diverse stakeholders to balance multiple and sometimes conflicting interests surrounding land and resource use. Property rights regimes that define which stakeholders have access to and benefits from natural resources are therefore a central concern of ILM. ILM can provide valuable opportunities to address tenure and rights challenges that impact food security, biodiversity conservation and climate change at local and global scales. In turn, addressing property rights are central to the effectiveness of landscape initiatives.

While property rights have always been part of the discourse in ILM—and conflicts over property rights are often a driver behind the formation of landscape partnerships—the topic has not been given the attention that it deserves. This scoping study began a systematic exploration of key issues and innovations in tenure and property rights in the context of ILM. These will inform the development of a framework for analyzing these systems, and design of practical actions that landscape stakeholders can take to establish and enforce systems of rights that support inclusive, sustainable development.
Current knowledge and practice

Land insecurity, conflicts over land and resource rights, and the need to renegotiate and evolve property rights in response to new conditions, challenges and opportunities are widespread global phenomena.

Some issues typically seen as specific to the Global South, such as land expropriation and concentration, are occurring at as fast a rate in Europe as in Africa. Land security issues are also not just found in rural areas but play out across a broad spectrum of land uses, for example as found in the urban case study from Detroit. The advent of international mechanisms to address climate change through payments for ecosystem services has added to the complexity of land governance and property rights issues. Sometimes this has led to ‘green-grabbing,’ where the interests of corrupt dealers and government officials are pitted against the local communities and indigenous peoples whom carbon payments are intended to incentivize and benefit. Often-heralded approaches to address local livelihood, conservation, tenure security and management concerns, such as community-managed landscapes, may lead to investments that undermine inclusive governance or environmental outcomes. Legitimate and secure holders of use rights within a landscape may still conflict with one another over indirect use and control rights around ecosystem services.

The enormity of the challenges has prompted an unprecedented level of analytic work as well as innovative strategies for securing and negotiating rights that enhance equity, development options and environmental outcomes.

A look at 12 international organizations involved in various property rights issues revealed the value of NGO partnerships and networking to fill gaps in analysis, technical assistance and advocacy. It also highlighted the importance of making data and information available to different stakeholders, including government, the private sector and local people. Such evidence can be used by advocacy groups to push information forward and out to policy makers who hold the power to make changes in the law, and also redistributes power to marginalized groups so that they are able to fight more effectively themselves for improved land rights and tenure security in policy-making forums at the local, national and international levels. Many tools have been developed for mapping, facilitating, negotiating, defining and securing property rights in mosaics of agricultural, pasture and forest lands.
Gaps in knowledge for ILM

A review of the questions raised in section 2 suggests that many issues related to property rights and tenure that are especially central to ILM are still not well addressed.

Particularly weak is the available guidance for effective and just negotiation around land and resource rights and responsibilities among legitimate rights-holders, in response to threats of resource degradation and climate change. Similarly, processes for establishing rights to ecosystem services that incentivize long-term stewardship by non-owners are not well developed. Better strategies are needed for securing critical use rights, including for ecosystem services, for the landless and other marginalized groups.

Finding politically acceptable and practical ways to improve linkages between land rights and good resource management is paramount. We need to learn how to generate community and public support for making rights to benefits contingent on good management practices and outcomes. If property rights need to be dynamic, in the context of rapidly changing socioeconomic and ecological conditions, we need to determine what kinds of rules should govern those transitions.

We also need to better integrate the different strands of work on property rights and tenure for different sets of natural resources, and explicitly understand the interactions between rights and rules for cropland, grazing land, forests, wetlands, water and biodiversity, as well as subsurface mineral rights, and guide more holistic systems of rights. We need to address the challenge of achieving gender equity in resource rights within stakeholder groups, while negotiating across stakeholder groups in the landscape.

Governments and other actors who have committed to the United Nations Sustainable Development Goals (SDGs) should mobilize the monitoring and knowledge-generation needed to better understand and improve relationships between land rights and sustainable management. A useful lever for change might be including relevant land tenure rights and responsibilities criteria in SDG reporting protocols, and engaging stakeholders in monitoring. Innovations in landscape monitoring protocols that are arising in integrated landscape initiatives could help focus the exploration.

National governments will typically establish authoritative rights, deciding who has legal rights of land and natural resource control, and the rules by which (national and sub-national) governments can assign rights to concessionaires, renters, and direct and indirect users. A fundamental question is the legitimacy of government decisions relative to rights of people living on the land. There may be considerable scope for ILM processes to play a role in defining and adapting control and use rights at landscape scale in response to local context and rights of non-owners to benefits from those resources. We increasingly need institutional mechanisms to incentivize voluntary stewardship and regeneration beyond regulatory minimum standards, and to resolve conflicts between legitimate rights-holders over ecosystem services that impact, and are impacted by, many legitimate rights-holders. How can, and when should, landscape-level negotiation and collective action positively influence the system of rights to support inclusive, sustainable development?
Advancing understanding and action on property rights and tenure in ILM: next steps

Without addressing the complex property rights challenges involved, the potential of ILM to address food security, biodiversity conservation and climate change will not be realized.

It is important then that these initiatives move beyond a tendency to ‘muddle through’ (Sayer et al., 2013) towards a greater understanding of processes and criteria that lead to positive outcomes for most or all stakeholders.

This scoping study suggests four sets of actions to advance understanding and action for more secure and equitable property rights that also advance the collaborative vision and goals of stakeholders in the landscape, in the context of rapidly changing pressures on the land and resource base.

1. Refine analytical frameworks for evaluating property rights within multi-level landscape governance. A next step is to build a robust framework for illuminating landscape governance and property rights issues and opportunities in the context of integrated landscape initiatives and identify levers of change for action. This could build on the framework for analyzing natural resource governance and property rights regimes proposed by Sikor et al. (2017). In distinguishing “use rights” (first order), “control rights” (second order), and “authoritative rights” (third order), this framework helps foster appreciation for the roles and responsibilities of diverse actors in understanding and improving the problem situation. Use of this framework in analysis can contribute to a better understanding of how hybrid, multi-level governance arrangements can link top-down authoritarian processes with more bottom-up democratic structures can foster continued engagement in, and effectiveness of landscape approaches (Ros-Tonen et al. 2018). Such a framework can help those engaged in ILM to better understand the context; lead to adaptation of approaches, strategies, and tools; and ultimately generate acceptable outcomes for all stakeholders.

2. Organize in-depth case studies in integrated landscape initiatives that focus on interactions among stakeholders and across land uses. The five desk-based case studies above reveal that while each situation is unique and context-specific, there are commonalities across the globe that can help inform strategy. A robust and more in-depth set of case studies is needed that specifically focus on the knowledge gaps and questions identified above, with a focus on interactions and negotiations among stakeholders and across land uses that characterize ILM, and will permit systematic comparative analysis. While finding universal solutions is unlikely, such comparative studies can generate guidelines, principles and processes for application and adaptation in specific situations.
3. Incorporate knowledge about property rights challenges and solutions in complex landscape mosaics into practical tools for ILM at all stages. Property rights are commonly noted as important issues in ILM, and resolving property rights challenges are central objectives in some landscape initiatives. In the latter cases, property rights experts may be brought in for technical support and targeted tools. However, this study shows that even where property rights are not an entry point in ILM, a more systematic approach to address property rights is needed at all stages of the landscape management cycle: assessment, stakeholder process, landscape action planning, implementation and monitoring. Thus, existing tools being used by landscape partnerships in each of these stages need to be reviewed and property rights elements reinforced in light of lessons learned.

4. Disseminate existing tools more widely to ILM leaders. Resource materials and tools that can inform design and implementation of property rights solutions in ILM should be made more widely available to practitioners. There also need to be more means for sharing learning across organizations. A number of immediate opportunities exist, through the national and regional landscape learning networks in eastern Africa and Mesoamerica co-convened with the Landscapes for People Food and Nature initiative, which hold regional peer-to-peer learning dialogues. The annual global and regional meetings of the Global Landscapes Forum (GLF) provide an opportunity for discussion and dissemination of new knowledge and cases, as well as through the Landscape Academy. A major effort is needed with leading organizations in research and advocacy on property rights, to raise awareness and enthusiasm to address the challenges of property rights in the context of ILM.

5. Find ways to transform adversaries into allies by developing new models for ethical collaboration between indigenous/local communities and international companies/investors. Creative partnerships could be designed that secure land tenure and livelihoods for the former, and more sustainable supply chains/networks for the latter. This is a trend that is just getting started and shows strong potential.

The challenge of designing and negotiating property rights systems that ensure streams of equity and conservation benefits to localities as well as global society, while simultaneously creating incentives for investment in sustainable development, is central to the mission of ILM. It is possible that ILM processes and sustained multi-stakeholder landscape partnerships may themselves lead to new models of property rights around land and resources. Re-imagining and re-negotiating property rights to meet the challenges of landscape stewardship of our natural resource base are priorities for sustainable and regenerative development in the 21st century.
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