



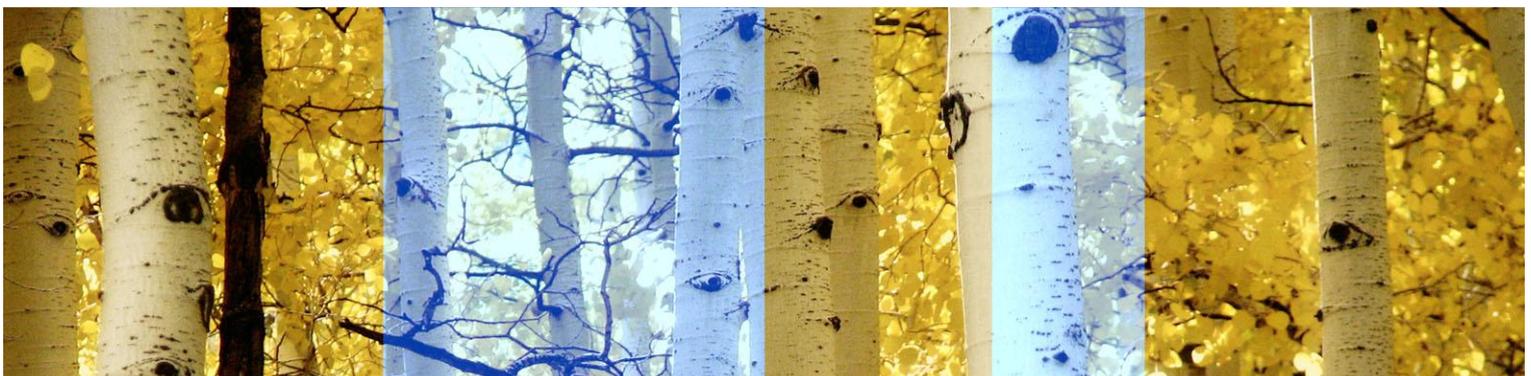
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Analysis on the Costs of Securing Communal Land Rights: New Technologies and Approaches Offer Potential for Scaling Up

Prepared for the Rights and Resources Initiative

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ABBREVIATIONS

AMAN	Indigenous Peoples' Alliance of the Archipelago
CCRO	Certificates of Customary Right of Occupancy
CLRR	Community Land Rights Recognition Model
FAO	The Food and Agriculture Organization of the United Nations
GNSS	Global Navigation Satellite System
GPS	Global positioning system
HA	Hectare
ICT	Information and Communication Technologies
IFAD	International Fund for Agricultural Development
INGO	International non-governmental organization
IP	Indigenous Peoples
LUP	Land-use plan
MMR	MapMyRights
MoL	Ministry of Lands
MOU	Memorandum of understanding
NGO	Non-governmental organization
OMI	One Map Initiative
PLUP	Participatory land-use plan
REDD	Reducing emissions from deforestation and forest degradation
RRI	Rights and Resources Initiative
SRLI	Systematic Rural Land Inventory
UN	United Nations
USAID	United States Agency for International Development
USD	United States Dollar
VLUP	Village land use plan
WB	The World Bank



1. INTRODUCTION

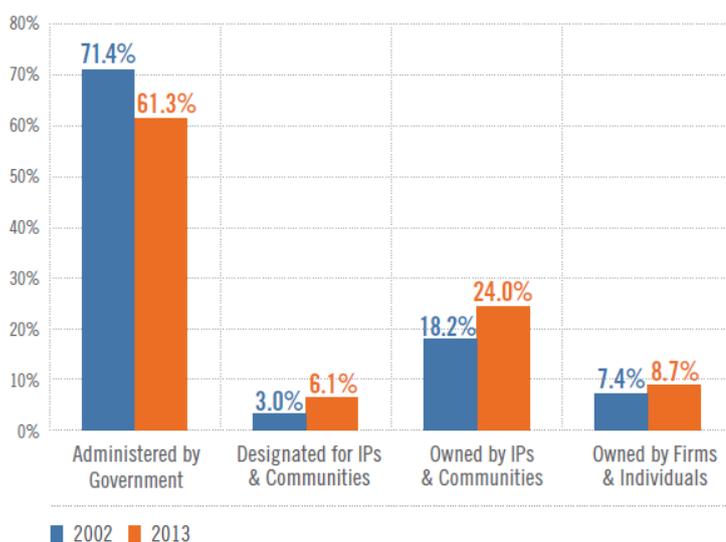
1.1 Background

Securing land rights is widely recognized as a key factor in many interlinked development goals, such as poverty reduction, sustainable natural resource management, as well as increasing the equality of vulnerable groups.

Regardless, only 25% of the six billion land parcels worldwide are formally registered and have robust security of tenure (McLaren, 2014a). This translates to 75% of the world's population not having access to formal systems to register and safeguard their land rights (McLaren, 2014b). The situation is particularly evident in regions with large agriculture-dependent populations and low food security, many of which are in Africa (Locke & Henley, 2014).¹ Indeed, according to Byamugisha (2013), economic growth in Africa is being held back by confusion over land ownership since 90% of Africa's rural land is undocumented and informally administered. Consequently, The World Bank has called for the full documentation of all communal lands and declared that improving land governance was vital for creating economic opportunities for Africans (RRI, 2014a). Furthermore, the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* provide an overarching framework under which numerous nations have committed themselves to improve tenure management (FAO, 2012).

Figure 1.1 provides statistics summarizing the state of forest tenure in 2013 and the related trends during the last 10 years. Although land areas owned by Indigenous Peoples (IP) and communities have increased, they still represent only a small share of total forest land. Most of the land (and related tenure rights) controlled informally by these groups are still not recognized. The government and state companies still overwhelmingly claim control over forest land; in several countries more than 90% and even close to 100%.

Figure 1.1 Global change in statutory forest land tenure, 2002-2013, by percent in low and middle income countries



Source: RRI (2014b). What Future for Reform? Progress and slowdown in forest tenure reform since 2002. Washington DC: Rights and Resources Initiative.

¹ More than 50% of global large scale land acquisitions take place in Africa.



Considering the above, there seems to be a strong call for securing tenure rights globally. Nonetheless, RRI (2014a, 2014b) reports that recognition of Indigenous Peoples' and local communities' land rights to forest lands appear to have stalled in recent years. Also, the depth and implementation of tenure related laws remain restricted. According to RRI (2014a), many enacted laws recognize only weak rights and apply to only limited areas. This means that vast areas and resources are vulnerable to escalating land grabbing in different parts of the world. In 2013, the Munden Project (2013) analyzed over 150 million hectares of industrial concessions in 12 emerging market economies and discovered that at least 31% of the total concession area overlapped with local community property both with recognized and unrecognized rights. Such overlapping can potentially create significant conflicts that may, in turn, diminish the interest of responsible investors on areas with contested tenure systems.

Efforts to secure land tenure have often been isolated projects carried out by various entities, such as development banks, international non-governmental organizations (INGOs), local NGOs, United Nations (UN) organizations and bilateral development agencies and naturally also government led initiatives of varying intensity and scale. The applied methodologies vary highly on their costs, tools and approaches due to numerous different land tenure contexts. Cost-effective methods for better securing local tenure rights have been demonstrated in some countries, but still, in many others, these methods are not known or put into practice. In 2009, an attempt was made to map out costs in the context of REDD (Hatcher, 2009). However, no comprehensive up-to-date review is available. Also, existing data is often difficult to interpret since definitions, steps used for securing land tenure rights, and ways of accounting for costs are not easily comparable.

1.2 Objective and scope of the study

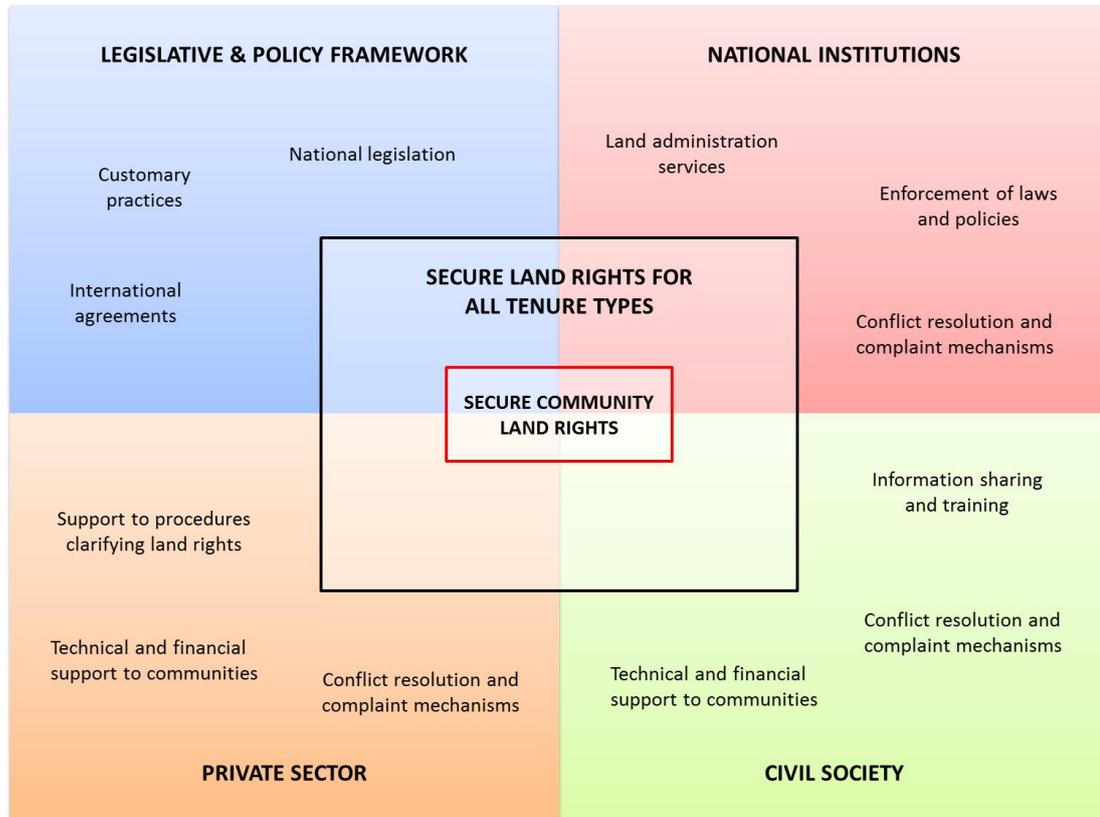
The **objective of this study** is to provide an updated analysis on the costs and best practices of securing land rights in different land tenure contexts in developing countries. Special attention is given to **communal land tenure rights recognition**. This is in a way a follow up to another RRI study (Hatcher 2009) which viewed land tenure rights issue in the REDD (reducing emissions from deforestation and forest degradation) context.

The study focuses on reporting up-to-date cost information rather than on writing an extensive descriptive report. The results should be understood as a part of larger land tenure context. In other words, any presented recommendations or best practices are not universal as their success depends largely on the prevailing governance framework and available technical solutions. The scope of the study is visualized in Figure 1.2.

After presenting the general methodology of the study, essential concepts and definitions are reviewed to facilitate the interpretation of the results. As part of this process, an attempt is made to generalize certain key steps in communal land rights recognition to provide a framework for presenting the results in the following chapter. Finally, before presenting the conclusions, innovative new methods and initiatives for securing land rights are discussed. Together with the presented cost data, this will give a more complete picture of the current and future realities to tackle land rights issues in a cost-effective manner.



Figure 1.2 Scope of the study



1.3 Methodology and data sources

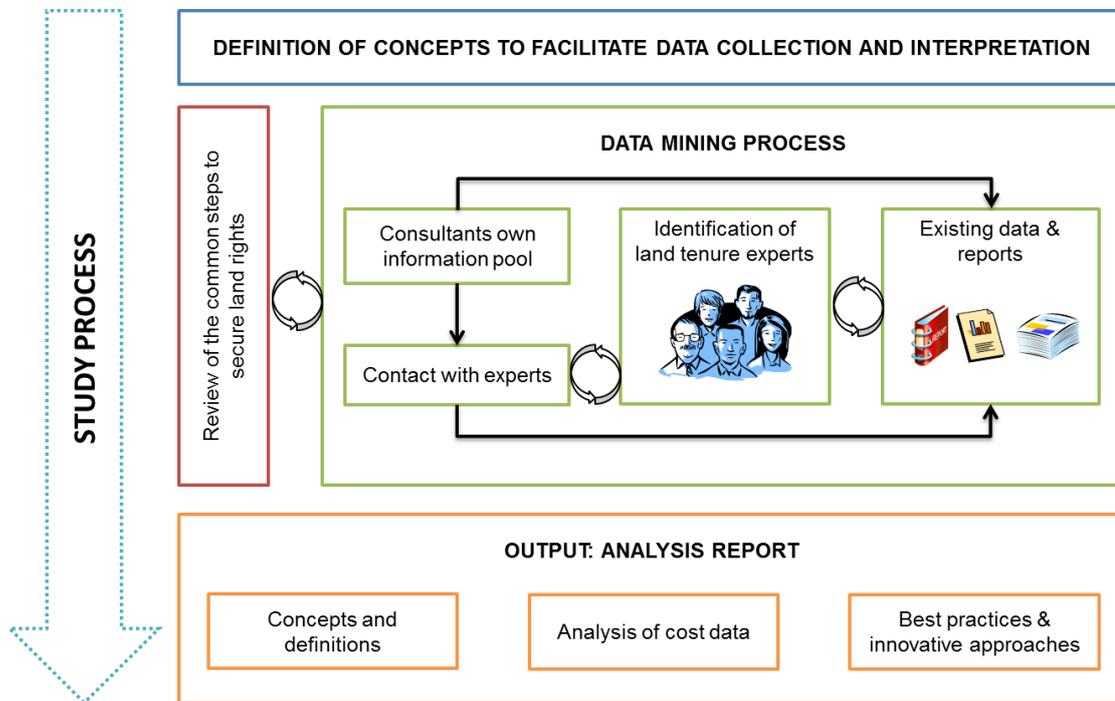
The work was carried out as a desk study. Concepts and definitions were clarified early in the study to facilitate data collection and interpretation. This was followed by extensive data mining to identify existing comparative studies and key reports and data on costs and best practices in securing land rights primarily in developing countries.² Simultaneously, a number of land tenure experts were contacted with the aim of acquiring latest information on costs and best practices, as well as identifying other experts. These experts represent various entities working with land tenure issues, such as development banks and organizations, INGOs, universities and research institutions, and think tanks (Appendix 2).

Early on, it was necessary to review the needed steps and methods to secure land tenure under different contexts and typologies. This was seen as a prerequisite to understand the comparability of the costs. The issue was revisited several times during the study process as additional information was gathered. Figure 1.3 illustrates the flow of the study process as a whole.

² See Appendix 1 for some of the key websites used for information collation.



Figure 1.3 Desk study process



Limitations on the comparability of results

Information on costs on securing land rights seems to be scarce. Most of the experts contacted (Appendix 2) could not identify documents presenting numerical data on costs (especially in a comparable manner).³ This is understandable, as much of the work is carried out in an isolated manner under various funding mechanisms that tend to report on costs of the intervention in a very general manner. Indeed, when cost data is presented, it is rarely broken into such a detail that would allow the reader to distinguish how much was spent on different phases/steps/activities/technologies in the land rights recognition process. Also, data is scarce for land policy and legal reform processes needed to create a solid framework for recognition of rights. Obtaining more comparable data on costs would require extensive research and access to numerous field project documents and budgets in order to guarantee a reasonable degree of comparability. However, this was beyond this study's scope.

³ In addition, some experts were not able to reply to information enquiries within the available time window.



2. KEY CONCEPTS, DEFINITIONS AND STEPS IN LAND RIGHTS RECOGNITION

2.1 Key concepts and definitions

Clarifying concepts and definitions is important when discussing tenure and tenure security as these terms are not always used in a uniform manner. The following definitions are provided so that the reader can put the provided statistics and also the cost information below into context. Much of the discussion and concrete activities related to securing land tenure are not always founded on clear concepts and understanding of the underlying complexities and special features of communal land tenure. The common misconceptions are to push for land allocation and formal recognition of territorial titles. While this is often relevant, it has to be acknowledged that many important communal rights, like those enjoyed by Indigenous Peoples, are not based on recognition of territorial boundaries but can be tied to use or access rights, sometimes even applying to specific trees. Further, various systems can co-exist even with overlapping boundaries in customary and informal contexts. It is also possible to have private land rights of individuals within collective land tenure.

The following definitions make clear the variation between the views of key organizations on land rights.

FAO (2002) defines land tenure in the following way:

“Land tenure is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land.⁴ Land tenure is an institution, i.e., rules invented by societies to regulate behaviour. Rules of tenure define how property rights to land are to be allocated within societies. They define how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints. In simple terms, land tenure systems determine who can use what resources for how long, and under what conditions.”

The International Fund for Agricultural Development (IFAD) (2012) summarizes the above definition as: “*rules, norms and institutions that govern access to land*”. When these are clearly defined by statutory and/or customary laws and practices, there is less room for misconducts. Based on the above land tenure definition, FAO defines the following tenure categories which it often uses in representing statistics (FAO, 2012; FAO, 2002):

- State/Public: property rights are assigned to the State or some other authority in the public sector. In developing countries, governments control most of the land, especially in terms of forests.
- Private: the assignment of rights to a private party (e.g. an individual, a married couple, a household, or a corporate body).
- Communal/indigenous/collective/customary: a right of commons exists within a defined group of people where each member has a right to use independently the holdings of the group.
- Open access: specific rights are not assigned to anyone and no-one can be excluded.

Tenure arrangements may involve exclusive access (when only one person or group has access), or different types of access for different groups of people at different times (FAO, 2011). In order to understand the types of property rights better, FAO has grouped them loosely (FAO, 2002):

- Use rights: such as right to use the land for grazing, collecting minor forest products, growing subsistence crops, etc.
- Control rights: such as right to decide how land should be used, e.g. selection and sale of crops and by which actors.

⁴ “Land” is used here to include also other natural resources such as water and trees.



- Transfer rights: such as right to sell and inherit land, and decide about its use and control rights etc. (relevant particularly for private land titles, but also for communities if they were to decide e.g. to lease out part of the land they control).

Even though the types of land tenure can be generally categorized, they vary in detail from country to country depending on the legal context and prevailing customary and administrative practices. In reality, a multitude of property rights can be found within a given tenure category in developing countries. This is especially evident where strong and vibrant customary laws and practices coexist with the statutory legal system (thus leading to legal pluralism). RRI 2014 has provided a list of “bundle of rights” that defines a broad set of interrelated rights, it builds on the earlier RRI report (2012) and concepts developed by the research community interested in property rights and land tenure. It is important to note that in this list, the rights are not based necessarily on always defining territorially the rights, which has also implications on the technical and legal process for defining the rights.

- The **access right** is the right to enter or pass through a particular space.
- The **withdrawal right** is the right to benefit from the resources on the land. Legal instruments frequently differentiate between the ability to withdraw resources for subsistence and for commercial purposes. In forest areas, the withdrawal right may be differentiated further according to the type of forest product, namely timber versus non-timber forest products.
- The **management right** is the right to regulate and make decisions about the forest resources and territories for which the actor(s) have recognized access and withdrawal rights. An important distinction is whether communities may have rights to manage through their own institutions alone or jointly with a government entity.
- The **right of exclusion** is the right to refuse another individual, group, or entity access to and the use of a particular resource.
- The **right to due process and compensation** (“extinguishability”) is the right to judicially challenge a government’s efforts to extinguish, alienate, or revoke one, several, or all of the rights held by an actor. If such a challenge to the government’s extinguishment fails, the rights-holders are entitled to compensation.
- **Duration** concerns the length of time in which the abovementioned rights may apply; they may be time-bound (as leases), or they may be granted in perpetuity. While many time-bound tenure regimes have distinct provisions for periodic renewal, failure to renew would, in many contexts, extinguish the rights held under a particular regime and revert tenure back to legal state administration.
- The **alienation right** (related to FAO’s definition of transfer rights) is the right to transfer one’s rights to another entity—whether through sale, lease, the use of the resource as collateral, or inheritance. Inheritance rights are often inapplicable to communities since the rights are held collectively, and there is no single rights-holder whose exclusive rights can be inherited by another.

IFAD (2012) defines land tenure security as “*enforceable claims on land supported by national regulatory frameworks*”. UNHABITAT (2008) describes the issue more broadly by listing two major components that are important for all forms of land rights in terms of tenure security:

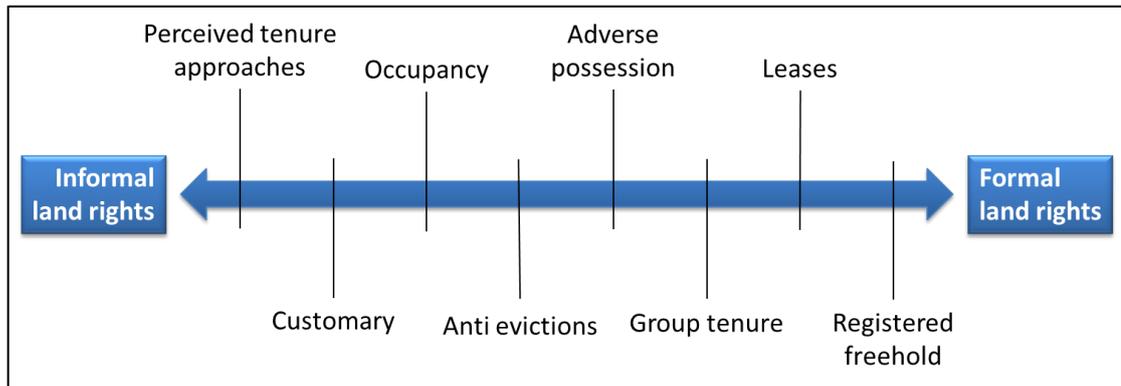
- Reasonable duration of rights appropriate to the use to which the land is put and the social needs of the land user, and
- Effective legal protection against eviction or arbitrary curtailment of land rights, with enforceable guarantees and legal/social remedies against the loss of these rights

UNHABITAT (2008) visualizes a range of land rights as a continuum (Figure 2.1). Each point on the continuum provides a different set of rights and degrees of security and responsibility. These rights can be informal or formal depending on their recognition in the existing legal framework. Note that this continuum refers only to the formality of the land rights, and not to



the desirability of different types of tenures. Customary rights are in most cases informal but they can also be legally recognized, that is moving towards the other end of the continuum.

Figure 2.1 Continuum of informal and formalized land rights



Source: Adapted from UNHABITAT (2008)

In general, as long as certain types of land rights, informal or formal, are well described and recognized by the prevailing governance framework, they are not easily contested. For example, informal land rights may be secure if they are locally recognized and enforced by institutions viewed as legitimate by those living on and using those lands (Locke & Henley, 2014).

2.2 General steps for securing communal and other land rights

Before reviewing any cost data, it is useful to discuss different phases and steps that commonly take place when working to secure land rights. At the national level, this would commonly mean improving governance through policy and legislative reforms, as well as modernizing land administration practices. Byamugisha (2013) lists 10 elements that could help improving tenure security on a country level (Appendix 3).

It is estimated that as many as two billion people are currently living under customary tenure regimes (USAID, 2013). Much of the existing literature and research has concentrated on the issue of securing customary rights by moving towards communal/group tenure (e.g. Knight et al., 2012; Larbi & Kakraba-Ambah, 2013; Nielsen et al., 2011; Ministry of Lands, 2011). In many parts of the world collective resource management systems exist and formal land (and tree) tenure systems should recognize them. Private ownership or use rights can exist within these areas depending on the context, but securing communal land tenure is the ultimate goal. It is also important to note that this offers often a more feasible framework for managing land and related natural resources at a landscape level and facilitating arrangement to better benefit from environmental services (carbon sequestration benefits) and undertake joint development activities.

Sometimes when group tenure has been established, it is easier to move into individual/smallholder titling if it is appropriate to recognize the right-based approach and otherwise deemed relevant and desirable. Indeed, Byamugisha (2013) starts his list of 10 elements by 1) "improving tenure security over communal lands" followed by 2) "improving tenure security over individual lands" and 3) "increasing land access and tenure for the poor and vulnerable". Succeeding in these three key elements requires largely local action within a favorable national framework.

As securing communal land rights is a priority, and in many cases the most effective first step in improving the tenure security, it is important to look into it more closely. Table 2.1 presents



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a compilation of common phases/steps in securing communal land rights. The information is gathered and simplified from various field examples,⁵ of which Community Land Rights Recognition (CLRR) Model is presented in more detail in Appendix 4. Each phase/step has a varying degree of staff, material or logistic costs depending on the context and methodology used.

Many of the activities presented in Table 2.1 can (and should) be performed simultaneously to cut costs. Before taking the first step, it is good to assess the context of the desired intervention as different situations require different set of steps to reach the best possible outcome. A rushed attempt to improve tenure security can actually lead to increased conflict. For example, in some situations aiming for individual control/transfer rights may not be a viable option if existing governance structures and/or customary practices do not support such a goal. In this case, securing communal land rights (group tenure) can be a more functional solution.

⁵ In addition to the example presented in Appendix 4, other sources of steps towards securing communal land rights are presented in Knight et al. (2012), Lastarria-Cornhiel et al. (2012), Nielsen et al. (2011), USAID (2008), Larbi & Kakraba-Ambah (2013), Sagashya & English (2010) and Pritchard et al. (2013).



Table 2.1 Common steps in securing communal land rights⁶

Phase	Potential steps/activities
<p>1 Preparatory assessment</p> <p>Aim: To define the key steps/activities required for securing land rights (in some cases interventions may not be feasible)</p>	<ul style="list-style-type: none"> • Awareness raising on the opportunity to secure land/resource rights (Is there a demand for land rights recognition?) • Feasibility assessment to clarify the legislative and governance context, as well as if the community can work together productively and is willing to genuinely address and resolve intra- and inter-community land conflicts.
<p>2 Community/Stakeholder engagement</p> <p>Aim: Improve ownership of the process in a non-discriminatory and cost-effective way</p>	<ul style="list-style-type: none"> • Engagement of key stakeholders and education on the process of securing land rights • Selection of a coordination committee or advisory “working group” to lead the process • Training of paralegals, inventory team and other supporting personnel
<p>3 Recording of claims and governance rules</p> <p>Aim: Establishment of clear and commonly agreed boundaries and rules that provide a basis for more formal land tenure recognition</p>	<ul style="list-style-type: none"> • Harmonize the boundaries with neighbors (MOUs, boundary trees etc.) • Sketch-map of the agreed boundaries • Draft and adopt community by-laws/constitutions to govern intra-community land administration • Define conflict resolution processes • Draft and adopt community land and natural resource management/zoning plans
<p>4 Demarcation by state technical staff</p> <p>Aim: Generate accurate information on agreed boundaries that fulfil the requirements of official land administration bodies</p>	<ul style="list-style-type: none"> • Demarcate boundaries using appropriate technology • Document agreements on boundaries
<p>5 Registration, titling, administration</p> <p>Aim: Registration and issuance of titles as well as other system administration and upkeep</p>	<ul style="list-style-type: none"> • Election of a “governing council” responsible for the administration and management of community land and natural resources • Verification and validation of technical and governance documents among the community and government agencies • Demarcated land registered • Certificate of title

Source: Based on examples presented in MoL (2011), Knight et al. (2012), Lastarria-Cornhiel et al. (2012), Nielsen et al. (2011), USAID (2008), Larbi & Kakraba-Ambeh (2013), Sagashya & English (2010) and Pritchard et al. (2013)

⁶ The presented list of phases/steps is not exhaustive, chronological or universal. The aim is to keep it general enough to allow for contextual variation.



3. THE COSTS OF SECURING COMMUNAL AND OTHER LAND RIGHTS

This report expanded the work carried out by RRI in its previous study on costs (Hatcher, 2009). Special emphasis was given to securing communal land rights, since this is seen as an urgent global challenge due to the pressure of large-scale acquisitions and vast unmapped areas.

The results in this chapter are grouped into two tables,⁷ according to the type of costs they represent. Table 3.1 presents the costs of components related to some of the key steps for securing communal land rights,⁸ whereas Table 3.2 reviews information on costs of components related to securing individual/household land rights.

There is naturally overlap between the cost categories since many of the steps are similar. Each data line in these two tables provides an explanation on what the cost reflects, as well as the unit and country in question. This should provide the reader with an adequate background for understanding the typical costs in a given context, as well as a reference to the source in case more information is needed. No attempt has been made to convert the cost data to similar units as this would not increase the comparability of results due to divergent realities behind each cost figure. Further, it is important to understand that these steps represent concrete action needed to secure communal land tenure and facilitate later on the process of having these rights legally recognized and registered. However, there must also be legal frameworks to recognize the collective rights. This can cause serious bottlenecks, e.g. in the case of community rights maps that have been prepared in a participatory manner but the administrative system does not really know what to do with them (see the section on community mapmaking). Unfortunately, cost data on land policy and legal reform processes was not available during the writing of this report. This is likely due to the fact that unless there is a specific related project, "unit" costs are not really reported.

Securing communal rights

Securing communal rights is naturally more common to rural areas in developing countries where strong customary traditions still prevail. The data presented in Table 3.1 indicates that the cost of improving the security of communal land rights through delimitation oscillates generally between USD 2,000-10,000 per village, depending on the country and methodology. On average, the cost seems to generally fall around USD 5,000. The various cost data for delimitation process may include highly variable activities and often aim at acquiring official certificates that recognize the claim of the village/community over certain land area. Delimitation costs per hectare seem to generally fall within USD 2-5. This estimation is similar with the averages presented in Hatcher (2009).

It is noteworthy that some of the results are based on relatively recent projects or pilot initiatives, and hence costs are likely to go down once methodologies are refined in subsequent scaling up phases. In many cases, training of paralegals has helped to bring down the costs, as well as aided in gaining the trust of the locals in the process. Costs have also been brought down by taking a systematic approach to working with all the communities in the region, rather than applying a more sporadic approach of targeting individual villages. Cost differences of similar activities between different countries are likely to be attributable to the varying staff and logistics costs, as well as labor costs of required administrative steps. In the case of Mozambique, Knight et al. (2012) and De Wit & Norfolk (2010) report similar average

⁷ Appendix 1 presents cost estimations on scaling up land administration in Sub-Saharan Africa.

⁸ It is important to bear in mind that the listed costs do not guarantee full security over land rights. They merely illustrate how much certain components generally cost in a given context. The success of these components in securing land rights depends largely on the prevailing legislation and governance of land tenure in the country in question. However, even in contexts where land rights recognition is poor, documenting of community/small-holder land claims makes it more difficult to carry out large-scale land grabs due to the threats of bad publicity and international outcry.



expenses for community land delimitation. This indicates that there are no great differences in methodologies between these two examples.

Securing individual rights for smallholders

Securing individual—e.g., smallholder farmers’—rights is required more in situations where rural inhabitants do not form strong communal entities; this is true in particular in urban or semi-urban areas. The relative importance of communal versus individual land rights varies greatly among countries and even within countries. Sometimes, securing communal rights can be the first step towards recognizing individual rights within broader areas where communal and individual rights co-exist.

Most cases presented in Table 3.2 demonstrate a systematic approach to land rights recognition. Unit capital costs for systematic titling vary a lot but generally fall between USD 10-50 per parcel. However, on average the results seem to be closer to USD 15-20 per parcel. Costs per hectare (ha) vary a lot depending on the size of the parcels. Hence, titling costs for urban land are usually much higher due to the smaller size of the land parcels. Recurrent costs of the subsequent rural land administration activities after titling are relatively low. For example, in Rwanda they remain below USD 1 per parcel.

When compared to communal costs, individual/household titling may be very expensive. For instance, if individual land titling would cost USD 25 per parcel, and a community would include 1,000 parcels, this would result as a total cost of USD 25,000 for the whole community. This is significantly more than any cost estimation presented in Table 3.1.



Table 3.1 Costs related to securing communal land rights

Component/action ⁹	Comments	Cost in USD	Unit/Area	Country	Source
Demarcation and registration	Fixed-boundary survey, mainly using global positioning system (GPS)	500	village	Tanzania	
		77	km		
Identification, adjudication, and survey of boundaries, and registration	Fixed-boundary survey, mainly using GPS or total stations (costs are high largely because of delays in agreeing on boundaries and the need to clear dense vegetation before surveying the boundaries)	500-700	km	Ghana	Byamugisha (2013)
Delimitation and land certification	General-boundary survey, using sketch maps	2,000-10,000	village	Mozambique	
Delimitation	MCA community land delimitation project (113 delimitations, over 1 million ha, costing approximately 4 million)	4	ha	Mozambique	TerraFirma (2013)
Delimitation	All inclusive (all staff salaries, office rent, petrol, office supplies, per diems for government technicians, lunches for community members during the geo-referencing process, and other costs); full services support by a trained technical team	3,968	village	Mozambique	Knight et al. (2012)
	All inclusive; paralegal support	3,563	village		
	All inclusive; communities provided with only monthly legal education	1,717	village		
	All inclusive; full services support by a trained technical team	7,700 ¹⁰	village	Liberia	
Demarcation and land certificate	A community land certificate provides solid evidence of the land right without the need to go through the far more expensive process of land titling	14,000 (7/ha)	2 000 ha	Mozambique	De Wit & Norfolk (2010)
Delimitation	Average range	2,000-8,000	1,000-20,000 ha		

⁹ The presented components/activities are not uniform but depend on the context. For example, “delimitation” may in some cases include also registration and/or certificates even if not explicitly mentioned.

¹⁰ Similar costs were reported from Uganda. These costs are expected to be reduced around USD 5,000 after improvements in methodology.



Component/action ⁹	Comments	Cost in USD	Unit/Area	Country	Source
	Under-estimated (salaries of the service providers are not included)	1,596	community		
	Total costs - high estimate (includes overheads resulting from general institutional support costs of the service provider)	8,714	community		
	Average range excluding facilitation salary costs	2,200-5,500	community		
Delimitation	Includes NGO salaries	10,000	community	Mozambique	Tanner et al. (2009)
	Excluding NGO salaries	5,000-6,000	community		
Village land use plan (VLUP)	Average cost; forms a basis for further activities aiming for Certificates of Customary Right of Occupancy (CCROs). Costs include e.g. salaries, transport, materials and preparation of maps. For more accurate breakage of costs, see page 14-16 of Mango & Kalenzi (2011)	3,185	village	Tanzania	Mango & Kalenzi (2011)
Participatory land-use plan (PLUP)	Costs include all transport costs, field staff allowances and materials, but not the subsequent land allocation activities	350-450	village	Cambodia	Rock (2004)
		3,000	commune		
Land-use plan (LUP)/ Land allocation	More participatory approach funded or co-funded by projects; a 10 day process including all maps and land allocation	400-600	village	Lao PDR	
LUP	Standard rate	1,900	commune	Vietnam	
Formal maps and title	Produced with the help of paralegals (includes fees, supplies, salaries, transportation etc.)	5	ha	Ecuador	Lastarria-Cornhiel et al. (2012)



Table 3.2 Costs related to securing household land rights

Component/action ¹¹	Comments	Cost in USD	Unit/Area	Country	Source
Rural titling	Unit capital cost (use of satellite images and aerial photos for land administration purposes)	35-41	ha	Rwanda	Sagashya & English (2010); also quoted in Byamugisha (2013), and Lemmen & Zevenbergen (2010)
		9-11	parcel		
	Recurrent costs of the subsequent land administration activities	2.5	ha		
		0.9	parcel		
Urban titling	Unit capital cost (use of satellite images and aerial photos for land administration purposes)	150-200	ha		
		9-10 ¹²	parcel		
	Recurrent costs of the subsequent land administration activities	14	ha		
		0.82	parcel		
Titling	Non-communal land or settler land	15-18	ha	Ecuador	Lastarria-Cornhiel et al. (2012)
Individual land titling	Demarcation and titling; mainly refers to the preparatory work of the titling procedure, including the costs of the local consultation process	280	average plot of few ha	Mozambique	TerraFirma (2013)
	More complete cost calculation; does not include field travel costs for cadastral technicians	839			
	Full cost estimation	1000			
Title	Title deed with proper surveyed diagram (planning, survey, conveyance, management / rights enquiry). The price depends on numbers (generally individual title of plots of land), as well as complexities of zoning and applicable legislation.	120-300	plot	South Africa	Personal communication
	Full title and diagram if planning issues (consents) can be streamlined.	100-150	plot		
Title	Cost efficient (self-financing) overall operational costs for district-based systematic land registration and digital cadaster (costs from investment, equipment, training, operations; revenue from fees)	10-12	parcel	Lao PDR	GIZ (2014)

¹¹ The presented components/activities are not uniform but depend on the context. For example, “delimitation” may in some cases also include registration and/or certificates even if not explicitly mentioned.

¹² Also quoted in APP (2014).



Component/action ¹¹	Comments	Cost in USD	Unit/Area	Country	Source
	Only operations costs (6 plots/day/team)	14	parcel		
	Only operations costs (10 plots/day/team)	11	parcel		
	Total costs (6 plots/day/team)	25	parcel		
	Total costs (10 plots/day/team)	16	parcel		
Land certificate	Issued for 20 million parcels of land (2003- 2005) without using a base map. Using locally elected, unpaid community land use and administration committees and forgoing surveying of land boundaries	< 1	parcel	Ethiopia	Byamugisha (2013)
Cadastral index map	Pilot	< 5	parcel		
Land certificate	Based on satellite imagery or an aerial photomap. Same legal value as traditional land titles but much cheaper (14 vs 500 USD) and issued in shorter time (6 months vs up to 6 years)	14	certificate	Madagascar	
CCRO	Systematic adjudication pilot: 33,350 land parcels adjudicated based on satellite imagery, and about 27,000 CCROs were issued	45	parcel or CCRO	Tanzania	
Systematic titling	Based on a detailed survey of boundaries (in bulk), with systematic adjudication to increase transparency and reduce costs, for urban and high value rural land	32	parcel	Ghana	
		23	parcel	Uganda	
		25	parcel	Thailand (90s)	
CCRO ¹³	Registration and issuance of CCROs after ensuring the district land registry and village land registries are in place; land parcels are adjudicated and processed. Takes place after the VLUP-process (see Mango & Kalenzi (2011) in Table 3.1). The village consists of 1,200 parcels	12 375	village	Tanzania	Mango & Kalenzi (2011)
		10,3	parcel		
Participatory mapping of rights	In Nkaw in Oshwe territory, Bandundu province (including preinvestment: training, equipment etc)	2.27	ha	DRC	Mahambi (2010)
	In Nkaw in Oshwe territory, Bandundu province (excluding preinvestment costs)	0.75			
	Estimate for mapping 100 000 000 ha of Congolese forest (over 10 years)	0.85			

¹³ See page 17 of Mango & Kalenzi (2011) for more detailed cost information.



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Component/action ¹¹	Comments	Cost in USD	Unit/Area	Country	Source
	Includes initial village meetings, field surveys, map production, village level validation, delivering the map to the authorities. The cost can halved in a dense areas, e.g. I Java (USD 1080)	2160 or 1080		Indonesia	Indufor field mission, May 2014; based on data from JKPP
Systematic Rural Land Inventory (SRLI)	Demarcation without monuments	45.3	parcel	Ghana	Larbi & Kakraba-Ambah (2013)
Land registration	First time individual/household land registration (expensive examples)	> 100	parcel	Multi-country	Knight et al. (2012) quoting Burns (2007)
	First time individual/household land registration (on average)	20-60			



Table 3.3 Costs of recognizing tenure rights as presented by Hatcher (2009)

Country	Type of area	Type of recognition	Cost(USD)	Area (ha)	Cost/ha (USD)	Average costs/ha: community vs household
Bolivia	Community	TCO ¹⁴ and community titles	28 878 000	2 900 000	9.96	Community territories \$3.31/ha (\$3.66/ha in 2014 when considering inflation) ¹⁵
Brazil	Protected area (social reserve)	Demarcation and registration	0.5	1	0.50	
Brazil	Indigenous territory	Demarcation and registration	218 032	3 970 000	0.05	
China	Collective forests	Land certificate	352 000 000	160 000 000	2.20	
Mozambique	Community	Demarcation and registration	282 634	1 608 903	0.18	
Mozambique	Community	DUAT	13 876	2 000	6.94	Household plots \$23.16/ha ¹⁶ (\$25.59/ha in 2014 when considering inflation)
Cambodia	Household parcel	Title	8.5	0.9	9.44	
Indonesia	Household parcel	Title	30	0.87	34.50	
Indonesia	Household parcel	Title	32	0.87	36.78	
Laos	Household parcel	Title	18	1.57	11.46	
Philippines	Household parcel	Title	51	2.16	23.61	

Source: Adapted from Hatcher (2009)

¹⁴ *Tierra Comunitaria de Origen*: Legal recognition of indigenous communities.

¹⁵ The calculation for inflation was made by using 2009 as the baseline and converting the sum for 2014 equivalent. The following website was used for the conversion: <http://www.usinflationcalculator.com/>.

¹⁶ This average is similar to the average titling cost per parcel compiled by Burns (2006). In his examination of the titling costs per parcel in Armenia, Kyrgyzstan, Moldova, Indonesia, Thailand, El Salvador, and Peru, the per parcel costs ranged from \$10.55 to \$55.69, and averaged \$26.12.



4. EMERGING COST-EFFECTIVE PRACTICES FOR SECURING COMMUNAL LAND RIGHTS

4.1 Potential for cost-savings in securing communal land rights

The cost information presented in the preceding chapter demonstrates the significant variation in the units costs related to securing communal land rights. One of the implications is that there is potential to do things “better”. Scaling-up of the efforts and implementing them quicker will require large-scale adoption of cost-effective and innovative approaches. At the field level, cost-effectiveness can be improved by moving away from small individual projects towards more systematic scaled up approaches. The adoption of new technologies¹⁷ and methodologies has a potential to reduce costs but they must be tailored to fit the context. On a large scale, great savings can be achieved when modernizing land administration technologies and by establishing initiatives and platforms that support dissemination of information and innovative practices.

In many cases, communal land rights recognition has proven to be more cost-efficient option than individual land rights recognition. For example, assuming a cost of USD 5,000 per village (one village consisting of an estimated 1,000 parcels) or USD 20 per parcel, the formal registration of the remaining 4,5 billion parcels¹⁸ of unsecure land would cost USD 22.5 billion or USD 90 billion, respectively. In this case, securing communal land rights would be four times cheaper than that of individual rights. Although this estimation does not represent a factual global average, it still demonstrates the advantage of communal land rights recognition in terms of cost-efficiency. Therefore, opportunities to document and/or register community lands should be prioritized in regions where the governance framework is in place to support it.

Examples of cost-effective practices in securing land rights are summarized in Box 4.1. It is good to recognize that the success of these best practices is context specific and that some of these technologies are relevant both for securing communal and household land rights.

Box 4.1 Cost-effective practices in securing land rights

Land administration

Replacing aerial photomaps costing US\$150/km² with newer technologies (such as satellites) have the potential to reduce the cost of land administration. For example, Google Earth is free and satellite imagery costs around USD 25/km².¹⁹ In terms of land titling, photomaps are a very cost-effective tool (USD 10-20 per parcel) as land parcel boundaries can be charted on them without more detailed surveying of boundaries (at least USD 50 per parcel). Detailed surveying is still often called for in situations requiring very accurate boundary demarcation (e.g. urban areas and rural areas of high value).

Shifting away from old colonial paper-based land administration systems to modern, efficient and transparent solution brings down costs and increases revenues (due to lesser chances of corruption). In Ghana, decentralizing and computerizing its land registries, merging its land agencies, and strengthening property valuation reduced the number of days to transfer property from 169 in 2005 to 34 in 2011 and increased land-related revenue from USD 12 million in 2003 to USD 132 million in 2010. The target for Uganda’s pilot of computerized land records and registration systems was to reduce the number of days to transfer property from 227 in 2007 to 48 in 2011.

¹⁷ When calculating real costs for applying a given technology, the following issues have to be kept in mind: training, support, development, license, maintenance, subscription (WB, 2013).

¹⁸ Figure based on McLaren (2014a).

¹⁹ Quickbird satellite images are quoted to cost USD 23 per sq km in Namibia (Kapitango & Meijs, 2010) and USD 17 per sq km in Ethiopia (Lemmen & Zevenbergen, 2010).



Securing communal land rights

In countries where governance frameworks for recognizing communal tenure and customary systems are strong, community land documentation may be a more efficient method of land protection than individual and family titling. Documenting or registering the community land as a “meta-unit” seems to be the least costly means of protecting rural households’ land claims in such cases. Therefore, it should be prioritized in short term.

It is easiest to work with communities of between 2,000 – 4,000 residents as support for complete participation becomes more challenging with more than 1,000 households. One field team of three to four technical and legal experts can supervise up to 50 paralegals working in approximately 25 communities. Involvement of paralegals increases the effectiveness of the process. The scale is limited only to the number of field teams and funds. Depending on the methodology and country context, the community land protection process can take one to two years for each community, and should not be rushed. In the end, legal empowerment process is an important product in itself. Working to secure the land rights of numerous neighboring communities simultaneously reduces the costs for each village as many activities can be grouped.

Field work

Modern and proven equipment, software and methodology must be thoroughly tested in the field before roll-out. For example, heat, glaring light and dust, as well as lack of electricity and internet coverage are common characteristics of many field conditions. Choosing appropriate surveying technologies reduces the risk of unnecessary costs or time delays.

Knowing the target group allows well planned public awareness campaigns and subsequent education of the support staff, thus leading to speedy roll-out of activities.

Source: Byamugisha (2013), Larbi & Kakraba-Ambah (2013), Knight et al. (2012), Communications with experts (Appendix 2)

4.2 Review of some promising new methods and initiatives

Mayers et al. (2013) have assembled an extensive report that introduces numerous useful tools that can be applied in securing both communal and individual land rights. Although the report does not present any numerical data on costs, it gives an indication on the required degree of the “level and quality of information and stakeholder engagement,” as well as “resource requirements” (the amount of time, money and skill needed to make the tool work). In addition to the tools presented in Mayers et al. (2013), there are various other new and/or innovative initiatives and methodologies that aim to improve security over land rights. Some of them are discussed in this chapter the following text boxes.

Mapping for Rights²⁰

Mapping For Rights, an initiative of the Rainforest Foundation UK (RFUK), is an online platform which brings together expertise in the fields of participatory mapping, geo-spatial technologies and policy development concerned with community and indigenous land rights and improved forest governance in the Congo Basin. Through the development of national geographical databases or atlases, the site has the potential to act as a key forest planning and policy development tool for relevant government, NGO and international agencies, being able to:

- Illustrate the extent of existing occupation, and traditional tenure of forest lands throughout the Congo Basin, with a high degree of accuracy where needed;

²⁰ Compiled from RFUK (2012 & 2014).



- Contribute to, or provide a basis for, national and sub-national forest land planning and zoning;
- Illustrate where conflicts of use or rights already exist or could arise, both for national government planning and private sector investors;
- Provide a basis for programs and laws to reform or clarify forest tenure rights;
- Provide a basis for assessing and implementing payments to communities for REDD or Payments for Ecosystem Services;
- Assist in monitoring compliance with international agreements;
- Through the use of GPS technologies, provide a basis for real-time monitoring of forest areas inhabited and used by communities, which describes and geographically locates, for example, changes in forest status, breaches of community-protected areas, or threats to forests within REDD programs; and
- Facilitate development interventions.

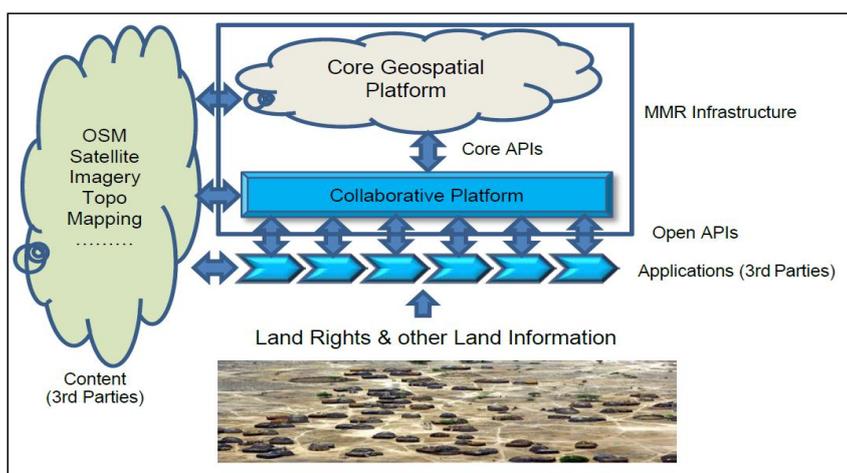
MapMyRights²¹

The global lack of access to formal land administration services is largely caused by a clear shortage of land use professionals. The MapMyRights (MMR) initiative attempts to react to this challenge by proposing a new approach by providing a free to use, transparent, global platform where citizens can record evidence of their land rights. The proposed solution is based on global cloud based platforms, ISO land information standards, mobile technology and participatory / crowdsourcing techniques to capture and maintain land rights (Figure 4.1).

The aim of the MMR initiative is to enable citizens and communities to protect tenure interests and encourage them to engage in more formalized systems, where greater protection and opportunities are available; for those with no rights it will generate security of tenure and for those with customary rights it will create opportunities to engage in the land market.

By uniting communities of interest across the land sector into a sharing ecosystem, MMR plans to facilitate the development of a new generation of land information capture and management tools, aligned with citizens' and NGOs' needs, which can significantly increase its outreach to the majority that do not have any means of increasing their security of tenure.

Error! Not a valid bookmark self-reference. MMR infrastructure architecture



Source: McLaren, 2014a

²¹ Compiled from McLaren (2014a & 2014b).



Innovative aerial photography²²

Indigenous groups from countries including Malaysia, Nepal, Panama, Mexico and Brazil, have adopted affordable, high-tech mapping technology to retrace the history of their land ownership and to catalogue their natural resources. In Sarawak, the eBario Innovation Village Project works as a living laboratory to incubate innovative grassroots applications of Information and Communication Technologies (ICTs). In partnership with University Malaysia Sarawak (Unimas), and with funding support from IFAD, the project is testing low cost aerial photography for community mapping, using digital cameras attached to tethered helium-filled balloons and radio-controlled model airplanes (Figure 4.1). The team has begun to generate high-quality photo montages that form the basis of detailed maps. Detailed maps are generally not available to the general public, or they are either prohibitively expensive or insufficiently detailed for the purposes that rural communities would wish to use them.

Figure 4.1 Innovative aerial photography



Source: Borneo Post

Community Mapmaking²³

Indigenous communities in Indonesia are using GPS technology to demarcate the boundaries of their ancestral land. The aim is that the two- and three-dimensional maps will help diverse aboriginal groups to guard the lands they depend on for survival. The digitized maps—which include spatial elements (physical geography of land formations and resources) and non-spatial information (sacred cultural and ritual sites)—cover more than 2.4 million hectares of indigenous areas. The usage of maps and their effectiveness depends on organization within communities and the balance of power with local authorities in each area. The maps are used in Indonesian courts by indigenous communities to defend their land rights. Tebtebba states that more than 600 cases have been filed in the past three years. Indigenous Peoples' Alliance of the Archipelago (AMAN) submitted 256 maps to the national Geospatial Information Agency in mid-November 2012 on behalf of aboriginal communities. This is in accordance with the government's One Map Initiative (OMI) launched in 2012. The maps have been accepted by the Agency, which can be seen as critical evidence for land rights.

²² Compiled from: <http://www.theborneopost.com/2013/09/25/don-rural-folk-want-map-to-determine-land-ownership/>.

²³ Compiled from: <http://www.communitylandrights.org/indonesian-indigenous-groups-fight-climate-change-with-gps-mapping/>.



ICT for Land Administration and Management

In order to enhance/maintain tenure security, land administration systems need to produce accurate, accessible, interoperable, timely, secure and complete information about land and property claims in a way that is affordable and efficient. Such transparency diminishes the occurrence of conflicts and generates confidence among different stakeholders. Innovative ICT solutions are at the core of developing these systems. McLaren & Stanley (2011) discuss numerous examples and upcoming trends on how to improve land administration, such as:

- By 2015, multi-constellation Global Navigation Satellite System (GNSS) will provide around 100 satellites for global positioning that will provide better accuracy and reliability, leading to positioning to within centimeters in a mobile environment.
- A new generation of ground-based LiDAR, mounted on vehicles, is emerging as the next “big thing” in surveying. Boundary features can be captured very quickly to an accuracy of around half of a centimeter, just by driving around.
- In the future, more countries are expected to release land ownership and rights information under open data initiatives. The private sector already offers free mapping through “Google-Earth,” “Google maps,” and “Bing-maps”.
- Most countries are developing initiatives to widen access to and use of geospatial information, but their maturity and success vary across the regions. In Latin America, for example, Chile, El Salvador, and Honduras are more advanced than others.
- Crowdsourcing can alleviate the lack of surveyors that currently exists in many countries. It is already applied and based on the following: (1) the widespread use of GPS and image-based mapping technologies by professionals and expert amateurs; (2) the emerging role of Web 2.0, which allows more user involvement and interaction; and (3) the growth of social networking tools, practices, and culture.
- Open-source solutions²⁴ provide viable options in countries that cannot afford the high costs of commercialized solutions that require a license.
- Web- and mobile phone-based information services have made a big difference in a relatively short time. Smart-phones, especially, provide a multitude of applications from GPS functions to accessing internet and taking pictures that can all be used to record data that is relevant for securing land tenure.
- Many land administration agencies are transforming paper-based conveyancing systems into a fully electronic procedure, using electronic documents, applications, and signatures.
- Many governments have established e-planning portals that allow citizens to access information related to land-use control, including zoning development plans, planning regulations, and general land-use information. A new generation of web-based GIS initiatives in public participation provides citizens with tools to analyze proposals, suggest and evaluate alternatives, and frame an online discussion of alternatives

²⁴ See <http://www.flossola.org/>.



5. CONCLUSIONS

Modern, cost-effective and innovative technologies, methodologies and initiatives for securing land rights exist. Hence, there is great potential to facilitate scaling of these efforts, but the progress is hindered by lack of trained tenure professionals (e.g. surveyors), slowly evolving tenure governance in many developing countries, and too heavy, and slow state-driven processes combined often with cumbersome donor interventions which are not necessarily making adequate use of new technologies and participatory approaches. Also, too often the result has been an array of isolated interventions. However, initiatives such as MapMyRights provide opportunities for sharing “isolated” experiences/methodologies on a collaborative platform. Also, innovative approaches, such as crowdsourcing, have been used in many occasions where professional surveyors are rare, and/or governments are lacking the funds or the will to map communal/indigenous areas.

Documenting or registering the community land as the “meta-unit” seems to be the least costly means of protecting rural households’ land claims in such cases. Therefore, it should be prioritized in short term.

In addition to potential cost savings, significant revenue can be generated by updating land administration practices. Modern and transparent systems reduce opportunities for corruption and the increased accumulated funds can be optimally used to finance further improvements and system maintenance. Therefore, one important future goal is to equip national/regional/local administrative offices with appropriate equipment and software, as well as to train their staff in data capture and storage. However, this will most often require extensive external funding, as well as a receptive host country with sufficient infrastructure to support technical modernization. Also, prior to investing in ICT to update land administration services, it is essential that the legislation and policies surrounding information transparency and access are updated, wherever possible.

In many places, significant advances in tenure security are difficult to achieve unless the legal and governance framework is reformed to meaningfully recognize, and coexist with, indigenous and customary land rights. Such reform has a direct link to costs as large-scale scaling-up activities are possible only if there is an institutional platform supporting them.

In conclusion, the results and discussions presented in this report highlight the abundance of innovative technologies and methodologies that have the potential to support extensive scaling-up of activities that increase tenure security. What is lacking is an enabling governance framework together with a sufficient number of professionals that could carry out such tasks. Moreover, a significant amount of funds have to be made available. This will require a more coordinated approach from various international and national funding bodies. Considering the gaps in tenure governance globally, the planned land and forest tenure facility is likely to have niches in many countries where it could support an advancing tenure reform, as well as activities aiming for securing communal land rights and strengthening land tenure in general.



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Appendix 1

Useful Links



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The following list of websites presents an overview of some of the sources used to gather information on securing land rights.

- Focus on Land in Africa. Available at: <http://www.focusonland.com/>
- Food and Agriculture Organization of the United Nations: Forest Tenure. Available at: <http://www.fao.org/forestry/tenure/en/>; and Forest tenure - Information Resources. Available at: <http://www.fao.org/nr/tenure/information-resources/forestry/en/>
- ICT in Agriculture. Available at: <http://www.ictinagriculture.org/>
- International Alliance on Land Tenure and Administration. Available at: <http://www.ialtanetwork.org/>
- International Development Law Organization. Available at: <http://www.idlo.int/>
- International Forestry Resources and Institutions. Available at: <http://www.ifriresearch.net/>
- International Land Coalition. Available at: <http://www.landcoalition.org/about-us>
- Landesa Rural Development Institute. Available at: <http://www.landesia.org/>
- Land Equity International. Available at: <http://www.landequity.com.au/>
- Land Matrix. Available at: <http://www.landmatrix.org/en/>
- Landportal.info. Available at: <http://landportal.info/>
- Land Resource Management Centre. Available at: <http://landresourcemanagementcentre.com/>
- Millennium Challenge Corporation: Property Rights and Land Policy. Available at: <http://www.mcc.gov/pages/sectors/sector/property-rights-and-land-policy>
- NAMATI. Available at: <http://www.namati.org/>
- Nelson Institute Land Tenure Centre, University of Wisconsin-Madison. Available at: <http://www.nelson.wisc.edu/lc/index.php>
- Scaling-Up Strategies to Secure Community Land and Resource Rights. Available at: <http://www.communitylandrights.org/>
- UNHABITAT: The Global Land Tool Network (GLTN). Available at: <http://www.gltn.net/>
- USAID Land Tenure and Property Rights Portal. Available at: <http://usaidlandtenure.net/>
- World Agroforestry Centre. Available at: <http://www.worldagroforestry.org/>
- World Bank: Land Policy and Administration. Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/0,,contentMDK:20451195~menuPK:336688~pagePK:148956~piPK:216618~theSitePK:336682,00.html>
- World Resources Institute: Land and Resource Rights. Available at: <http://www.wri.org/our-work/project/land-and-resource-rights>



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Appendix 2

List of Contacted Organizations



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In addition to relevant personnel working in the development cooperation projects coordinated by Indufor, around 60 experts (representing 25 organizations) provided comments on costs and best practices on securing land rights and/or indicated other experts that could be contacted. This helped to compile more up-to-date sample of the available cost data. The organizations/entities that provided comments include the following:

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Equity Group Foundation
hInterland Lda
KnowEdge
Land Equity International (LEI)
Land Issues Working Group
Land Tenure Centre (LTC), Nelson Institute for Environmental Studies
Landesa
NAMATI
Omidyar Network
Rainforest-UK
Tetrattech
The Center for People and Forests (RECOFTC)
The Department for International Development (DFID)
The Food and Agriculture Organization of the United Nations (FAO)
The International Institute for Environment and Development (IIED)
The International Union for Conservation of Nature (IUCN)
The Nature Conservancy (TNC)
The Rights and Resources Initiative (RRI)
The South African Geomatics Institute
The United States Agency for International Development (USAID)
The World Agroforestry Centre (ICRAF)
The World Bank (WB)
The World Resources Institute (WRI)
Well Grounded



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Appendix 3

Scaling-Up Program for Improved Land Administration



KEY ELEMENTS OF AND PATHWAYS TO SCALING UP LAND ADMINISTRATION IN SUB-SAHARAN AFRICA

Key element	Cost estimate (USD billion)	Scaling-up pathways: Lessons learned and good practices
<p>1. Improving tenure security over communal lands</p> <p><i>Aims to register all remaining communally owned land in most countries</i></p>	0,40	<ul style="list-style-type: none"> Organizing and formalizing communal groups Demarcating boundaries and registering communal rights
<p>2. Improving tenure security over individual lands</p> <p><i>Can be scaled up from the current 10 percent to about 50 percent of rural lands, enough to cover prime agricultural lands in most Sub-Saharan African countries, at a cost of USD 1 billion in at least 25 countries over 10 years</i></p>	1,00	<ul style="list-style-type: none"> Undertaking systematic titling with a spatial framework based on simple, low-cost technology and without a boundary survey for low-value rural land Undertaking systematic titling based on a detailed survey of boundaries for urban and high-value rural land
<p>3. Increasing land access and tenure for the poor and vulnerable</p>	0,50	<ul style="list-style-type: none"> Redistributing rural land using a willing-seller willing-buyer approach <i>About US\$180 million to build a strong foundation for land redistribution in six countries over 10 years</i> Regularizing rights of squatters on urban public land <i>About US\$300 million in 30 countries over 10 years</i> Removing restrictions on land rental markets Promoting gender equity with favourable laws and documentation of rights



Key element	Cost estimate (USD billion)	Scaling-up pathways: Lessons learned and good practices
<p>4. Increasing efficiency and transparency in land administration services</p> <p><i>Involves about 40 countries</i></p>	1.30	<ul style="list-style-type: none"> Decentralizing to empower local communities and traditional authorities, with clear provisions for social and financial sustainability Computerizing and developing land information systems and national spatial data infrastructure <i>Aims to enable the majority of Sub-Saharan African countries to replace their paper-based systems with more efficient and transparent computerized systems and to develop national spatial data infrastructure within 10 years</i> Modernizing surveying and mapping infrastructure, including geodetic referencing, base mapping, and cadastral systems
<p>5. Developing capacity in land administration</p> <p><i>27 countries at USD 15 million each</i></p>	0.40	<ul style="list-style-type: none"> Undertaking institutional and policy reforms to guide capacity development Undertaking training and knowledge transfer
<p>6. Resolving land disputes and managing expropriations</p> <p><i>At least 30 countries over 10 years</i></p>	0.20	<ul style="list-style-type: none"> Resolving disputes by building competent institutions: strengthening judicial institutions and removing backlogs, creating specialized tribunals, training judges, and empowering alternative forums and approaches Managing expropriations: updating laws, paying fair and full compensation, adhering to the principle of eminent domain, and improving the environment for governance
<p>7. Increasing scope and effectiveness of land use planning</p> <p><i>At least 20 countries over 10 years</i></p>	0.40	<ul style="list-style-type: none"> Anchoring land use planning in a national land policy Preparing spatial planning frameworks at national, regional, and district levels to guide local planning in urban and rural areas Preparing local land use plans in a participatory way using plans approved by democratically elected authorities
<p>8. Improving public land management</p> <p><i>At least 10 countries over 10 Years</i></p>	0.10	<ul style="list-style-type: none"> Inventorying, surveying, and registering all government lands Ensuring that land not critical for public goods and services is allocated to the poor in a transparent process or to investors in a competitive process



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Key element	Cost estimate (USD billion)	Scaling-up pathways: Lessons learned and good practices
9. Developing post-conflict land administration <i>At least five countries over 10 years</i>	0.10	<ul style="list-style-type: none">• Focusing on managing land-related conflicts early and developing land policies to address the underlying tensions after cessation of conflict• Encouraging that development partners deploy technical assistance early and rapidly to advise on resolution of policy issues• Re-establishing technical capacity to rebuild land administration• Using task forces and special commissions to fill the gap where governance institutions are weak or absent
10. Strengthening valuation functions and land tax policies <i>At least 10 countries over 10 years</i>	0.05	<ul style="list-style-type: none">• Developing partnerships of government at all levels, driven by local governments• Providing local governments with access to better land administration services and information• Integrating essential elements of local revenue generation, including a sound tax policy, tax assessment system, and computerized tax collection system
Total	4.50	

Source: Adapted from Byamugisha (2013)



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Appendix 4

Community Land Rights Recognition (CLRR) Model



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The CLRR-model sequences specific actions to be undertaken by the Government of Kenya for the recognition of community land rights as stipulated by Article 63 of the Kenyan Constitution 2010. This proposed process is a result of many months of consultation between a team of Ministry of Lands officials, the SECURE Project (funded by USAID and implemented by Tetra Tech ARD), four targeted pilot communities in Lamu County, local administration, and other stakeholders.

Step(s)	Outputs
Stage A: Demand for community land rights recognition	
Public awareness of opportunity to secure land/ resource rights in communities	
Stage B: Community Engagement	
Community education of process to secure land/ resource rights	
Establish and register a community land-holding and governance entity	<ul style="list-style-type: none"> Community land-holding and governance entity established and application for registration is submitted
Undertake community land tenure & resource rights inventory	<ul style="list-style-type: none"> Tenure Inventory File: Sketch maps of 1) past, 2) present, and 3) future land interests, natural resource assets, and community infrastructure, etc. Flowchart of community's current governance structure.
Stage C: Recording of Community land claims and governance rules	
Delineation of boundaries of customary land claims and interests	<ul style="list-style-type: none"> A preliminary sketch map of boundaries Documented agreements of boundaries (signed MOUs and/or planting boundary trees, taking photographs or other agreed mechanisms)
Land status verification	Land Status Verification Report
Recording and enhancement of community rules and regulations for land and natural resource governance	<ul style="list-style-type: none"> Draft of community land governance rules Draft land and natural resources management rules and regulations and enforcement and monitoring plan Draft land use plan
Stage D: Demarcation	
Demarcate boundaries	<ul style="list-style-type: none"> Draft survey plan Marked boundary points
Stage E: Validation & Finalization	
Statutory verification of survey plan	<ul style="list-style-type: none"> Authenticated survey plan
Community Finalization and Validation	<ul style="list-style-type: none"> Final, validated draft to send for technical review
Government review of Technical File	<ul style="list-style-type: none"> Feedback from Government agencies for finalization of Technical File
Finalization and Adoption of community rules and regulations for land and natural resource governance	<ul style="list-style-type: none"> Final community land gov. rules Final land and natural resources management rules and regulations and enforcement and monitoring plan; Final land use plan
Oversight of Compliance of rules by County Government	
Stage F: Issuance of Title	
Demarcated land divested to community	<ul style="list-style-type: none"> Appropriate document of divestiture is issued
Declaration of Community Land	<ul style="list-style-type: none"> Gazette Notice published
Confer Certificate of Title of Community Land Ownership	<ul style="list-style-type: none"> Certificate of Title

Source: Simplified version of the CLRR presented to Ministry of Lands (2011)



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