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# PERFORMANCE EVALUATION OF MOBILE APPLICATION TO SECURE TENURE (MAST) PILOT

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## BACKGROUND AND PROJECT DESCRIPTION

### Property Rights in Tanzania

When Tanzania gained independence from the British in 1961, the new President, Julius Nyerere, introduced the concept of African socialism, which transferred all customary land rights to newly-formed village councils and required collectivized cultivation of land. By the 1990s, calls for economic reform pushed the government to develop a new approach to property rights. Critically, this involved the development of a legal framework to support privately-held property rights, as well as abolishing collectivized agriculture. Efforts were also made to encourage foreign investment in Tanzania to increase agricultural productivity and support economic growth. The new legal framework sought to incorporate elements of the customary tenure system that prevailed prior to collectivization, while mandating equal rights for women and guaranteed positions for women on land governance committees. Although the legal framework supported private property rights, all land is still held by the President as trustee for the people of Tanzania, and any property rights granted are land use rights. Implementation of the new legal framework has been slow, and many elements have yet to be established. Despite the new laws governing private ownership of land, few occupancy rights have been registered. Additionally, efforts to register property rights to grazing land are still needed. Women's ownership rights are clearly established under the legal framework, but customary laws and traditions and lack of awareness of the laws often prevent women from exercising their rights.<sup>1</sup>

### Activity Description - Overview

The MAST project seeks to test the concept of a participatory or “crowdsourced approach” to capturing land rights information using mobile technology, in order to efficiently and affordably map and document land rights. USAID selected Tanzania as the country in which it will carry out the three pilot tests to “ground-truth” the technology, information transfer, and community education/advocacy components of the project's approach. The MAST pilot fits into USAID's strategic reform agenda pertaining to the use of science and technology to resolve development problems.

USAID/E3's LTRM office funds and oversees the MAST project through its Evaluation, Research, and Communication (ERC) Task Order under the Strengthening Tenure and Resource Rights (STARR) Indefinite Quantity Contract (IQC), and the implementing partner for the pilot sites in Tanzania is the Cloudburst Consulting Group. Based on encouraging preliminary results, USAID/Tanzania has recently decided to scale MAST in an additional approximately 40 villages in Tanzania's SAGCOT region.

The MAST project has developed and implemented a new methodology using mobile phone technology to facilitate the process of land registration and administration, as well as a new methodology that employs village youth as “Trusted Intermediaries” who are responsible for

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<sup>1</sup> USAID. (2011). “USAID Country Profile: Property Rights and Resource Governance – Tanzania.” Accessed from [http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID\\_Land\\_Tenure\\_Tanzania\\_Profile.pdf](http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Tanzania_Profile.pdf)

mapping the land in their village. The initial pilot was undertaken in the village of Ilalasimba, in Iringa District, and ran from January to July 2015. Work in two additional pilot sites in Iringa Region began in fall 2015, and will conclude by late spring 2016.

## Activity Description – Ilalasimba Village

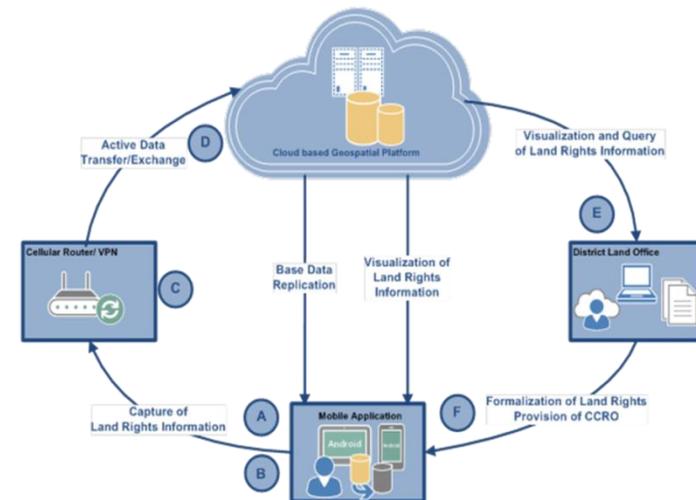
The MAST pilot in Ilalasimba developed an android application for recording Geographic Information Systems (GIS) coordinates and other land-related and biographical information that forms the basis of issuing Certificates of Customary Right of Occupancy (CCROs), which are legally recognizable customary titles issued on Village Land in Tanzania. The MAST pilot also developed a back-end database to help store and process the information gathered through the MAST app. This information is verified and cleaned by District Authorities, and used to issue CCROs for mapped parcels. Finally and perhaps most importantly, the MAST pilot developed a participatory methodology through which young “Trusted Intermediaries” from the targeted village were trained to map the parcels in the village and gather data from parcel occupants in order to facilitate the issuance of CCROs. The goal of MAST in Tanzania was to develop a “crowdsourced” mapping methodology that allowed for reliable, accurate, and legally accepted parcel data collection, while at the same time avoiding the need for expensive and inaccessible professional surveying services. While the original aim of MAST was not necessarily to deliver legally recognizable land rights documentation (but rather to develop customary and internally accepted maps of village landholdings), MAST seized an opportunity within Tanzania to convert data gathered into formally recognizable land documentation.

## How Does MAST Work?

The core of the MAST methodology involves the selection and training of Trusted Intermediaries within the MAST target village. These Trusted Intermediaries – usually youth with a secondary level of education and some familiarity with smart phones – walk each parcel in the village, along with the parcel occupant, a member of the Village Adjudication Committee, and the occupants of neighboring plots. The parcel is mapped using GIS, boundary conflicts are generally resolved in real time, and at the end of the process the Trusted Intermediary gathers from each parcel occupant the information necessary to formally apply for a CCRO (e.g. demographic information, household information, a photograph of the occupant, etc...). The data gathered is transmitted to District-level land authorities who are tasked, in accordance with the Tanzanian Village Land Act (1999), with delivering CCROs and maintaining land registries. The information is stored in a cloud-based storage facility that allows it to be exported to standard application forms and documents, which are then used to issue CCROs to landholders in the project area.

The MAST project also involves significant community organization and education

FIGURE I: MAST PROJECT



Source of Intervention Graphic: The Cloudburst Group

components to educate village residents about the project's land mapping service and how those maps can be used to obtain CCROs, and build a deeper understanding of priority issues related to land titling including their role in making investments and land transfers. These components include technical assistance interventions, training and capacity building for use of mobile technology in mapping, as well as a range of communication, advocacy and managerial activities.

As a pilot, the goals of the MAST include not only implementation, but learning, testing, and exploring the new approaches to support the Government of Tanzania (GoT) in delivering CCROs nationwide in a cost-effective and time-efficient manner. As with land administration in general, it is understood that there is no single solution for improving governance of land and that a nation's legal framework, local land tenure norms, professional landscapes, etc. will vary widely, thus predicating the need to adapt pilot activities to a variety of environments in order to gather as much experience as possible.

## DEVELOPMENT HYPOTHESIS

### Literature Overview

The theory of change for the MAST project described in this section is based on a review of the relevant literature, as well the evaluation team's understanding of the intended interventions.

The existing literature describes a number of underlying mechanisms whereby interventions, such as MAST, generate economic benefits by addressing issues related to weak property rights. Where rights to land are insecure, landholders perceive risks of conflicts related to land or expropriation by more powerful government or non-government actors. This risk weakens investment incentives by reducing the expected payoff to certain types of investment. Investments that are immobile or that pay off over time (e.g. wells, soil conservation measures) are less attractive if it is uncertain that land rights will be maintained during the time horizon over which the returns to the investment accrue (Besley 1995)<sup>2</sup>. Activities, such as MAST, aim to reduce these perceived risks and the propensity for landholders to make sub-optimal investment decisions, leading to an increase in more productive investments that are longer-term or tied to the land.

Insecure property rights may also have adverse impacts by inducing cultivators to allocate resources to defending property rights that could otherwise be put to productive use. Sjaastad and Bromley (1997)<sup>3</sup>, among others, have noted that certain types of visible investment, such as non-productive tree planting (i.e., along boundaries), are frequently made to strengthen recognition of property rights under informal tenure systems. Field (2007)<sup>4</sup> finds that insecure property rights can result in re-allocation of labor to watch over property and prevent competing claims. Where property rights are secure, investment and labor allocation strategies can instead be undertaken to maximize returns. The

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<sup>2</sup> Besley, Timothy (1995) "Property Rights and Investment Incentives: Theory and Evidence from Ghana" *Journal of Political Economy* 103 (5): 903-937.

<sup>3</sup> Sjaastad, E., & Bromley, D. W. (1997). Indigenous Land Rights in Sub-Saharan Africa: Appropriation, Security and Investment Demand. *World Development*, 25(4), 549-562.

<sup>4</sup> Field, E. (2007) Entitled to Work: Urban Property Rights and Labor Supply in Peru. *The Quarterly Journal of Economics* 122 (4): 1561-1602

evaluation team's scoping activities thus far have not found much evidence of these kinds of unproductive, defensive investments in the Tanzanian context, but the evaluation will nonetheless consider this possible channel of impact.

Weak property rights also limit the transferability of land. Where land cannot be easily transferred from one user to another, farm sizes will tend to be sub-optimal, as households are unable to adjust their land endowments to match their endowments of other factors and access to capital. In addition, the value of investments in land cannot be recouped in the land market if rights to land cannot be sold, which Brasselle et. al. (2002)<sup>5</sup> term "the realizability effect." On a broader scale, limited transferability may also reduce labor productivity by limiting the propensity of workers to migrate from areas where land-related employment is scarce to areas where land-related employment is abundant. In the case of Tanzania, land markets are limited and constrained by government restrictions and requirements for permission related to land transfers (USAID 2011)<sup>6</sup>. The MAST project may contribute to a broader process of deepening land markets and improving transferability of land, but the evaluation team does not expect observable shorter-term outcomes in these areas due to the current limitations of Tanzanian land markets.

The literature also recognizes that the formalization and strengthening of property rights can allow landowners to use their property as collateral to obtain loans from financial institutions, thereby improving access to credit. This argument was popularized in Hernando de Soto's *The Mystery of Capital* (2003)<sup>7</sup>. In the context of MAST activities, this impact may be limited because of weak formal markets in these land rights and other factors that make collateralized lending unattractive to lenders (e.g., higher returns from other types of lending, lack of experience with foreclosure procedures). However, there may be some impact on credit access if offering CCROs as collateral serves as a demonstration of commitment on the part of the lender. In the evaluation team's initial scoping efforts, access to credit was widely cited by landholders as a potential benefit to landholders of obtaining CCROs.

The MAST pilot seeks to test a concept that has been on the forefront of discussion within the land tenure community by implementing a participatory or "crowdsourced approach" using mobile technology to capture and create an inventory of land rights. In 2011, a paper by Robin McLaren<sup>8</sup> presented an innovative approach to the land administration conundrum, focusing on the possibility of "crowdsourcing" property information and challenging land professionals to redefine how land administration services might be managed and delivered. The paper explored how land professionals could engage citizens through crowdsourcing within a new citizen collaborative model for land administration that would be much more inclusive for the disadvantaged and vulnerable, increase access to land markets, drive down the costs of land administration, and help support poverty reduction. The MAST project has the opportunity to test an innovative approach that may offer significant savings in time and cost of land mapping and issuing property rights, compared to traditional methods, and thus may present an attractive alternative to the GoT for issuing CCROs nationwide.

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<sup>5</sup> Brasselle, A.S., Gaspart, F. & Platteau, J.P. (2002). Land tenure security and investment incentives: puzzling evidence from Burkina Faso. *Journal of Development Economics*, 67(2), 373-418.

<sup>6</sup> USAID (2011) *Property Rights and Resource Governance: Tanzania Country Profile*. Retrieved from <http://usaidlandtenure.net/>

<sup>7</sup> De Soto, H. (2000). *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York, NY: Basic Books.

<sup>8</sup> "Crowdsourcing Support of Land Administration- a new, collaborative partnership between citizens and land professionals." See RICS: [http://www.rics.org/site/scripts/download\\_info.aspx?downloadID=8083&fileID=10840](http://www.rics.org/site/scripts/download_info.aspx?downloadID=8083&fileID=10840).

## Theory of Change

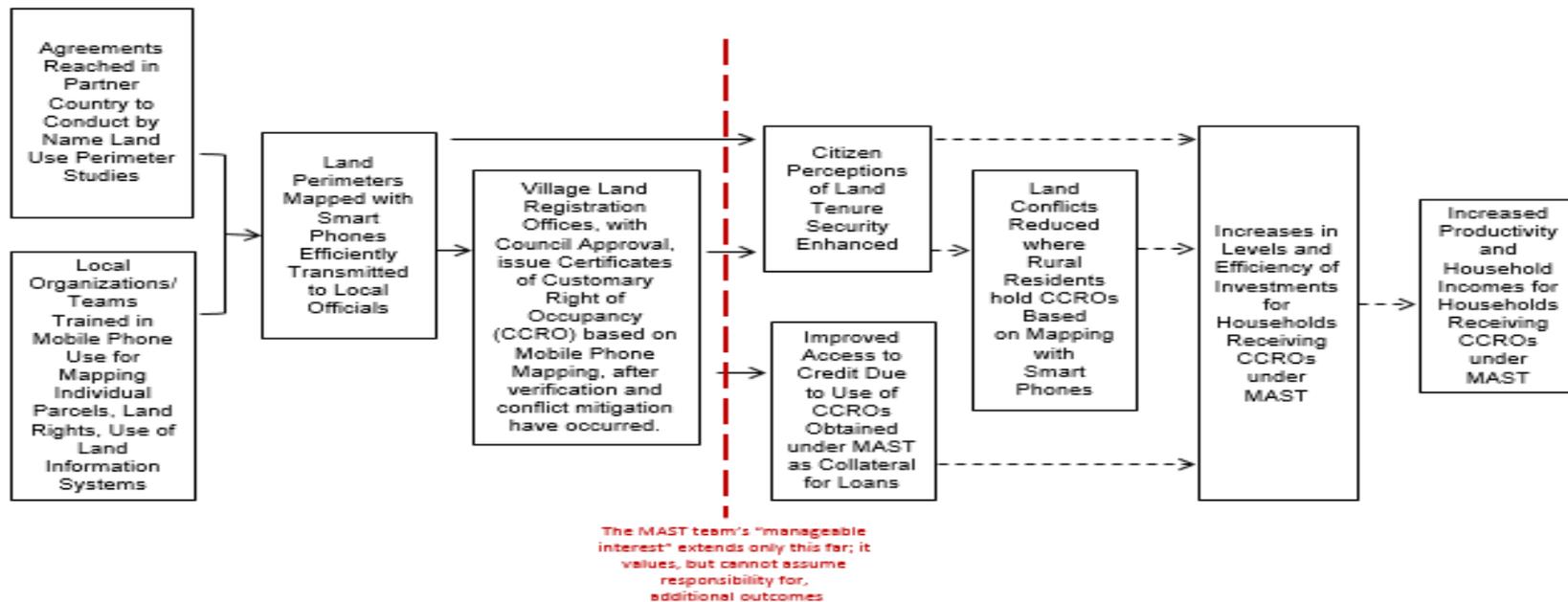
Figure 1 illustrates USAID’s development hypotheses for the MAST pilot, highlighting each of the intended results of the pilot and the presumed causal linkages (arrows). The “if” component of the development hypotheses is that the MAST project will successfully carry out mapping, data collection, and data transmission of the information needed for the government to issue CCROs in a fair, transparent, efficient, and cost-effective manner. Provided that MAST can successfully do this, the development hypothesis holds that beneficiaries will experience economic benefits from the improved tenure security that results from receiving CCROs. Additionally, the success of the MAST project can demonstrate that delivery of CCROs can be implemented cost-effectively and time-efficiently to present potential for scaling. These benefits are derived from increased access to credit,<sup>9</sup> greater levels and efficiency of investments, and reduced conflict.

The development hypotheses rest on a number of important assumptions. First, while the MAST project is intended to generate the information needed to issue CCROs, the legal CCRO documents must be issued by the GoT. Thus, all of the outcomes will require the government to follow through on issuing the documents. Second, the rights conferred by the CCROs must be viewed as legitimate and enforceable by the beneficiaries. Otherwise, CCROs will not improve tenure security and lead to beneficial economic outcomes. Third, the magnitude of the benefits resulting from improved credit access, investment levels and efficiency, and conflict reduction depend crucially on the particular circumstances, and may vary across beneficiaries. For example, issuing CCROs will only increase agricultural investment if farmers have technologies available in which to invest. Finally, the time and cost per parcel from the MAST approach must be lower than traditional approaches to land-mapping and issuing of property rights.

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<sup>9</sup> While increased access to credit has been hypothesized as an important outcome of land formalization, the credit effects of titling have been weak in Africa, likely related to weak credit markets (Lawry, S., Samii, C., Hall, R., Leopold, A., Hornby, D., and F. Mtero. 2014. The impact of land property rights interventions on investment and agricultural productivity in developing countries: a systematic review. Campbell Collaboration, Oslo, Norway).

**FIGURE 1: MAST PROJECT THEORY OF CHANGE**



## EVALUATION QUESTIONS

The performance evaluation of the first MAST pilot site (IlalSIMBA) considered the following overall question and related sub-questions:

- I. How did beneficiaries and other stakeholders in the first pilot site perceive MAST?
  - a. Was the mapping and verification process seen as transparent and participatory?
  - b. What disputes arose in the course of mapping and verification, and were these disputes resolved fairly?
  - c. Were the data collected by MAST sufficient to allow for the issuance of CCROs?
  - d. Did MAST outreach and communications activities inform and educate users of land in the MAST village on the appropriate land laws and related processes?

## **GENDER ASPECTS OF QUESTIONS**

In addressing the evaluation questions, data collection and analysis approaches devoted particular attention to identifying differences in the ways that men and women perceived transparency and inclusiveness of the mapping and verification process, experienced or perceived disputes, and interacted with the MAST outreach and communications campaign.

## **DATA COLLECTION AND ANALYSIS**

Data collection and analysis for this evaluation activity was based on three primary sources: project documents and monitoring data, Key Informant Interviews (KIIs), and Group Discussions (GDs).

## Performance Evaluation

### Question I: How did beneficiaries and other stakeholders in the first pilot site perceive MAST?

Data collection and analysis for Evaluation Question I relied on qualitative methods including in-depth interviews and GDs, described in further detail below.

#### Question Ia: Was the mapping and verification process seen as transparent and participatory?

#### Question Ib: What disputes arose in the course of mapping and verification, and were these resolved fairly?

The main source of data for answering sub-questions Ia and Ib consisted of interviews with beneficiaries in Ilalasimba whose parcels were mapped as part of the MAST pilot. The data collection approach took the form of one-on-one Key Informants Interviews (KIIs) or Group Discussions (GDs). The evaluation collected information from 93 individuals; 84 GD participants and 9 KII participants. This number is well above the standard benchmark of representativeness in small-n studies derived from the Central Limit Theorem.

Key Informants are individuals who were chosen for interviews because they hold special knowledge about MAST or other aspects of interest to the evaluation, and included the Village Chairperson, the Village Executive Officer, the Hamlet Chairpersons, and District Land Office staff who represent the Ministry of Land, Housing, and Human Settlements Development (MLHUS). GD participants, on the other hand, were intended to represent a diverse group of beneficiaries and non-beneficiaries of MAST in Ilalasimba and neighboring villages. The evaluation team held GDs with seven types of respondents, aiming to interview between 8 and 10 respondents in each group<sup>10</sup>: (1) a cross-section of land users in the pilot community who mapped their land through the MAST project and had already received CCROs; (2) a cross-section of land users in the pilot community who mapped their land through the MAST project but were still awaiting to receive their CCROs; (3) female land users in the pilot community whose households mapped their land through the MAST project; (4) other vulnerable groups (e.g. youth and pastoralists) in the pilot community; (5) mobile device operators (i.e. the Trusted intermediaries); (6) members of the Village Council and Land Adjudication Committee; and (7) a cross-section of land users from four neighboring villages.

#### Question Ic: Were the data collected by MAST sufficient to allow for the issuance of CCROs?

Data to address sub-question Ic primarily came from KIIs with District Land Office staff who represent the MLHUS and who work with the land information system in the process of issuing CCROs. Interviews were structured to assess whether District Land Office staff were able to use the information in the system to issue CCROs as intended, whether they have encountered any difficulties in using the system, and their views on the complexity and ease of use of the system.

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<sup>10</sup> Some groups, however, ended up with fewer people due to the absence of the sampled individuals. Conversely, other groups ended up with more participants because the evaluation team selected extra participants to account for potential absences, but all sampled individuals ended up attending and therefore participating.

### **Question 1d: Did the MAST outreach and communications activities inform and educate users of land in the MAST village on the appropriate land laws and related processes?**

To answer sub-question 1d, the evaluation conducted a detailed review of project documents in order to understand the aims and intentions of the campaign, as well as specific activities that the MAST project undertook. Analysis related to this question considers whether the messages and information disseminated in the campaign adequately informed and educated residents in Ilalasimba about the MAST intervention, as well as the extent to which the particular activities were successful in achieving their intended purposes. In addition to project documents, data sources used to address this question were similar to those listed under Question 1a, including GDs and individual interviews with beneficiaries and KIIs with village authorities and district land office staff. The approach to data collection was meant to ensure that the views of subgroups that might have different perspectives on these issues, such as women, youth, and pastoralists, were reflected in the sample selection.

## **Data Collection and Analysis Approaches**

### **Qualitative Data Collection**

Qualitative data collection provides valuable information on the “experiences, perceptions, opinions, feelings, and knowledge”<sup>11</sup> of individuals that inform the context, function and impacts of the MAST project. KIIs and GDs undertaken by the evaluation team served as a primary source of evidence for:

- **Understanding the local context and project appropriateness** - the social, economic, and political context of the region as well as the meaning of core concepts and language used by implementers and beneficiaries.
- **Assessment of project implementation**, including the degree to which project assumptions have held.
- **Assessment of the project's effectiveness**, including explaining reasons for why outcomes of interest were observed and contributing factors to anticipated and unanticipated outcomes.

### **Key Informant Interviews**

The evaluation team undertook KIIs with a variety of respondents including village government officials, adjudicators, community members who were involved in disputes, and district-level land office staff representing the MLHUS. The semi-structured nature of the KIIs enables a balance between keeping the interviewee on the topics of interest and allowing sufficient scope for a free-flowing discussion to take place.

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<sup>11</sup> Patton, M. Q. (2002) *Qualitative Research and Evaluation Methods 3<sup>rd</sup> Edition*. Thousand Oaks, CA: Sage Publications, Inc., pp. 4.

## METHODOLOGY FOR CONDUCTING KIIs

- A KII guide was prepared in advance of each interview outlining the key questions and probes to be addressed during the interview translated into Kiswahili.
- The interviewer attempted to record interviews where possible and appropriate, after obtaining consent from the respondent. The interviewer also took notes during the interview, and shortly after the interview completed a detailed set of notes. This was intended to serve as a backup in case of technical errors in recording. The notes also provide a summary/overview of the discussions that supplemented the voice notes transcripts in the analysis.
- The interview started with the more structured questions and pre-determined topics and ended with more open-ended questions meant to reveal unanticipated topics and themes.
- Analysis of the KIIs includes a summary of common themes that emerged in response to each topic in addition to “outliers” – highlighting the range of responses and experiences. This is supported by quotes from the participants.

The following Table includes a complete list of the respondents of the KIIs, including their numbers and the rationale for their inclusion:

KII No.	Interview Category	Respondents	Male	Female	Comment
1	<b><i>District Land Office</i></b>	2	2	0	Involved in project development, and in the registration of CCROs
2	<b><i>Land users involved in disputes</i></b>	3	1	2	To share dispute and dispute resolution experiences
3	<b><i>Village and Hamlet Leaders</i></b>	4	3	1	Involved in project implementation
<b>TOTAL</b>		<b>9</b>	<b>6</b>	<b>3</b>	

### Group Discussions

The evaluation team also undertook GDs with a variety of respondents. Land users in Ilalasimba were included to ensure that various segments of the community were represented, to gain qualitative evidence of what beneficiaries think about the project, why they feel the way that they do and to provide an in-depth understanding of the key drivers and barriers behind the outcomes that have been experienced. The team also undertook GDs with members of the Village Council and the Village Land Adjudication Committee, as well as with Trusted Intermediaries (village youth employed by the MAST project to undertake the mobile mapping). These GDs allowed the evaluation team to validate evidence obtained through other sources and provided additional suggestions about individuals and organizations to interview in communities and previously unknown activity results to explore.

### METHODOLOGY FOR CONDUCTING GDs

- In the sampling protocol, each GD was expected to include 8-10 participants, with additional participants to account for no-shows. In practice the participants that actually showed up for discussions ranged from 6-12
- Participants were engaged in an open discussion structured around predetermined questions (included in a discussion guide) led by the moderator.
- The moderator was assisted by a note taker, and all GDs were recorded with informed consent obtained from all participants prior to the start of the discussion.
- The discussion guide included 9 to 12 questions intended for a 90 minute group discussion, starting with broad questions and moving into narrower or key questions. The following types of questions were used: opening, introductory, transition, key, and ending. The questions were neutrally worded and neutral probes were used.
- Each GD was recorded and transcribed for ease in analysis. In addition, the note taker recorded key words, expressions, silences and non-verbal language of the participants.
- Reports of the GD include a general summary of participants' responses to each question – highlighting the range of responses and experiences. This is supported by quotes from the participants.

The following Table includes a complete list of the respondents of the GDs, including their numbers and the rationale for their inclusion:

GD Group No.	Interview Category	Respondents	Male	Female	Comment
I	Cross Section of Registered Land Users Still awaiting CCROs	10	5	5	Beneficiaries -Parcels were mapped and registered – CCRO Certificates still being processed at the district

GD Group No.	Interview Category	Respondents	Male	Female	Comment
2	Cross Section of Land Users who have received CCROs	9	4	5	Have already received CCRO certificates
3	MAST Trusted Intermediaries First Group	4	0	4	Trusted Intermediaries used by MAST to map villagers' parcels <sup>12</sup>
4	MAST Trusted Intermediaries Second Group	2	2	0	
5	<b>Neighboring Village (MAGUBIKE)</b>	8	5	3	Non-beneficiaries from neighboring villages. Interviewed to assess the spillover effects, perceptions of non-beneficiaries, and any unintended consequences
6	<b>Neighboring Village (MANGALALI)</b>	6	4	2	
7	<b>Neighboring Village (NZIHI)</b>	6	6	0	
8	<b>Neighboring Village (WERU)</b>	6	4	2	
8	<b>Village Council and Land Adjudication Committee</b>	8	5	3	Participated in Project implementation and verification of boundaries and parcel ownership, as well as on-the-spot dispute

<sup>12</sup>These two group discussions were originally intended to be conducted together, as a single group, however due to tardy arrivals of the male Trusted Intermediaries, the discussions had to be conducted in two groups.

GD Group No.	Interview Category	Respondents	Male	Female	Comment
					resolution
9	<b>Pastoralists</b>	12	12	0	Vulnerable group due to restrictions of their movement by land planning and titling processes
10	<b>Vulnerable Populations – Female land users</b>	6	0	6	Vulnerable group due to customs that promote dominance of male land rights
11	<b>Vulnerable Populations – Youth</b>	7	4	3	Vulnerable group due to inter-generational exclusions on land access
<b>TOTAL</b>		<b>84</b>	<b>51</b>	<b>34</b>	

## FINDINGS

This section presents the preliminary results of the MAST Performance Evaluation. The results are based on MAST field interviews that involved three (3) Key Informant Interviews and eleven (11) group discussions. The findings below are meant to answer the key Performance Evaluation questions that have been presented earlier. In answering each of the questions, the analysis looks into:

- Effects of the MAST Project in terms of
  - Positive findings/changes
  - Negative findings/changes
- Evidence of effects or changes
- Reasons for success or lack of it

A table summarizing results in detail for each question is contained in the annexes of this document.

### I. Was the mapping and verification process seen as transparent and participatory?

Overall the process was considered to be transparent and participatory, although there are areas that could have been improved. In particular, occasional disputes were caused by individuals who did not participate fully in the pre-mapping and verification activities, and individuals expressed concern that the Village Land Use Plan (VLUP), which was conducted outside of MAST as a pre-requisite for the intervention, did not properly account for all land use and access

**See Annex A for detailed table of findings.**

## **2. What disputes arose in the course of mapping and verification, and were these disputes resolved fairly?**

Types of disputes that arose included:

- Boundary disputes between owners of neighboring parcels
- Disputes between absentees from the village who left the village and abandoned (or gave away their lands) many years ago, and the current users of such lands. During MAST mapping in some cases both the previous owners/users and the current owners/users attempted to claim the lands as theirs in order to receive CCROs
- Disputes between people who sold their lands in the past and current owners who bought the land. During the intervention, both groups attempted to claim ownership; often those who claimed to have had sold their lands claimed that they had only rented or borrowed the land to the current users so it is still theirs.
- Family disputes which involved:
  - Disputes between family or clan members who couldn't agree on whose name(s) should be on the land titles/CCROs assigned to the family or clan land
  - Disputes between different potential heirs of land currently owned by the father. In cases where the father decided to give CCROs to only one or some of his children, the remaining children felt discriminated against (more problematic in polygamous families, when it was perceived that the father registered land more in favor of the children of one mother)

Particularly noteworthy were gender-based disputes. These disputes were caused by men who wanted to maintain traditional male dominance in land ownership against female members of the family or widows who wanted to obtain CCROs for their paternal family lands, or the lands of their deceased husbands, after being sensitized by MAST on women's land rights.

**See Annex B for detailed table of findings.**

## **3. Were the data collected by MAST sufficient to allow for the issuance of CCROs?**

Nearly all land parcels in the village have been completely mapped and registered for the issuance of CCROs. However, at the time of this study, only a small fraction of the CCROs had actually been delivered to villagers. Delivering CCROs is not the responsibility of MAST – in fact, by law,

only the District Land Office may sign and deliver CCROs – yet this delay caused certain beneficiaries to view MAST with skepticism, and even to wonder whether MAST was a cover for a land grabbing scheme.

**See Annex C for detailed table of findings.**

#### **4. Did MAST outreach and communications activities inform and educate land users in Ilalasimba on the appropriate land laws and related processes?**

The MAST outreach and communications activities involved seminars given to the village government (Village Council), Village Land Committee, Village Land Tribunal, and villagers. As reported by the interviewed village leaders and villagers, during these seminars they were informed and educated on the appropriate land laws and related processes such as land use planning, land rights and land titles including CCROs. Outreach and communications activities were viewed positively by most, however there were some villagers who were unable to participate in these activities and therefore could not benefit from the outreach and sensitization involved.

**See Annex D for detailed table of findings.**

## **GENERAL DISCUSSION: IMPRESSIONS, IMPLICATIONS, AND CONCLUSIONS**

Most Key Informants and Group Discussion participants understood MAST to include four main components: (1) The MAST Outreach & Education component; (2) The Village Land Use Planning (VLUP) component; (3) The MAST Mapping and Verification component; and (4) The Issuance of CCROs component. The Village Land Use Planning process is not part of the MAST project per se. It is a legal requirement in Tanzania to conduct a comprehensive VLUP before mapping individual land parcels and issuing CCROs. In other words, the presence of a VLUP was a pre-requisite for selection to participate in MAST, and not a part of MAST itself.

Generally, the Education & Outreach component and the Mapping & Verification component were positively perceived; but there were some major concerns about the Village Land Use Planning (VLUP) process as well as the Issuance of CCROs component, due to the delayed final issuance of CCROs.

### *Education & Outreach Component*

Among the three components that truly form a part of MAST, the Education & Outreach component was the most positively viewed by the Key Informants and Group Discussion participants. Participants expressed that the seminars conducted as part of Outreach & Education have helped them understand the value of their land, their land rights, the land laws, etc. One female respondent from the GD of a cross-section of land users still awaiting their CCROs made the following comment:

“We learned about land rights; that the land law gives us the rights to have customary rights of occupancy, even women land rights are protected by the law. That’s why many women like me want to get land titles from our families’ lands. Women have registered land with their husbands, others with other family members, and others individually”<sup>13</sup>

A male participant of the youth GD said the following about the MAST Education & Outreach component:

“During the seminars one important thing things that we learned is related to women land right. We learned that our sisters have equal land rights to inherit land. We used to believe in the custom that the owners of the land are the parents; and if our sisters get married, they do not preserve their land inheritance rights from their parents. Their rights are on their spouses land. But we learned that even when our sisters get married, they still preserve their land rights on their parents land.”<sup>14</sup>

Another female participant from the youth GD emphasized the importance of such seminars and the need for more sensitization to ensure increased participation:

“There were people who were just roaming about, but did not want to go to the seminars. Then it was some of these same people who created disputes during the mapping because they did not understand the exercise properly.”<sup>15</sup>

The sentiment that those who did not attend the seminars were responsible for a significant share of the lack of understanding and misunderstandings related to MAST was also reported in other group discussions, including by the Village Council, the Land Adjudication Committee and the Trusted Intermediaries.

#### *Mapping & Verification Component*

The MAST Mapping & Verification component was also generally positively viewed due to its perceived enhancement of legal recognition of villagers’ land rights, including women’s land rights, as two of the above quotes affirm.

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<sup>13</sup> Female participant of a Group Discussion of a Cross Section of Land Users who had registered their land parcels during MAST and were still awaiting for their CCROs, in Ilalasila Village, October, 2015.

<sup>14</sup> A male participant of a youth GD, Ilalasila village, MAST Group Discussions, Vulnerable Groups (Youths) October, 2015

<sup>15</sup> A female participant of a youth GD, Ilalasila village, MAST Group Discussions, Vulnerable Groups (Youths) October, 2015

There were mixed perspectives, however, regarding the VLUP process, which was not part of MAST, but was perceived by some villagers to be part of the intervention. On one hand, the VLUP process was considered to be a positive improvement to the otherwise haphazard land use in the village; on the other hand, it was criticized for being so rushed that it led to some major omissions. These omissions include public spaces for village meetings and playgrounds, future road networks within the designated settlement areas, and reserve lands for the future needs of vulnerable groups such as youth who come from families facing land shortages and who therefore did not receive CCROs. For youth who did not receive CCROs, buying land from those with CCROs in the future would likely be unaffordable, as there are indications that the promise of receiving CCROs is inflating the value of the land. In this regard, one male participant of the youth GD reported that:

“Land has become more scarce and more expensive because now people know the value of the land. In the past if I wanted a plot on which to build my house I could talk to a village elder who has a lot of land. I would buy him a drink and give him a small amount of money, and he would agree to give me a plot. These days to get a plot in this village, I might have to go all the way to the district and pay a lot of money for the title, and incur other expenses along the way”.<sup>16</sup>

Pastoralists also viewed the VLUP, which restricts pastures to the mountainous areas of the village, as being restrictive to their pattern of movement around the village in search of food and water during different times of the year. Some were uncertain about the legal protection of designated pastoralist spaces, including pastures and livestock paths. These spaces have been designated without officially being mapped, and have not received communal CCROs. One participant from the pastoralist GD remarked that:

“I think our leaders did not understand well this land use planning process right from the beginning. When we zoned different areas of the village including different land use zones, and even the roads and livestock paths, we should have had a map. Everything should have been clearly demarcated on a map. Why do I say this? Because, tomorrow or the day after tomorrow we of the older generations will die. Then some of our children who do not know what we know today may claim part the common land (e.g. pastures or livestock paths) as their private land, and block the pastoralists from accessing such land. But such possibility could be avoided if everything, including the pastoralists lands and other common lands were marked on the maps; and if even the common lands were mapped and given land titles during the land registration process. If there is a map showing all the different land zones and all the different ownerships, even the future generations will be able to see that map. Otherwise, without that kind of evidence, our children and future generations might have other kinds of land disputes. My other concern is that we have not set aside a reserve land for the village future needs and public land for village events, such as village meetings or other large gatherings that need large space. We don't have set aside such an open space. Nor have we set aside an area as a collective village farm. Before this project, we should have planned all this”<sup>17</sup>

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<sup>16</sup> A male participant of the youth GD, Ilalasimba village, MAST Group Discussions, Vulnerable Groups (Youths) October, 2015

<sup>17</sup> A male participant of the pastoralist GD, Ilalasimba village, MAST Group Discussions, Vulnerable Groups (Pastoralists) October, 2015

### *Issuance of CCROs Component*

The Issuance of CCROs component was seen most negatively by the Key Informants and Group Discussion participants. Only about 20 out of about 900 CCROs had been issued as part of the MAST project closing ceremony in Ilalasimba. At the time of this study, it was reported that the remainder were still being processed at the District Land Office. The issuance of CCROs is not the responsibility of the MAST project. It is the responsibility of the Ministry of Lands, which is represented by designated officials at the district level. The participants at the village level did not seem to have a clear understanding about the authority that was going to issue these CCROs, and there seemed to be no clear communication to the villagers about when the remaining CCROs were going to be issued. This led to concerns among some villagers that they might have been cheated by the MAST project implementers. Some concerns about MAST being a land grab scheme that were dispelled by the MAST outreach and education program are beginning to re-emerge among some villagers due to this delay. This implies that a continuous communication process is required beyond the initial public sensitization and education prior to the projects start.

### *Final Observations*

The two processes that have led to the most concerns (i.e. the VLUP process and Issuance of CCROs component) are not direct responsibilities of the MAST project; they are implemented by the District Land Office. The implication of this finding is that the technological efficiencies and effectiveness of MAST does not necessarily eliminate the bureaucratic inefficiencies and challenges at District Land Office level. Some of these challenges need to be investigated and understood before the start of any subsequent projects so that efforts can be made to minimize them. For example, although MAST is not directly responsible for the final issuance of the CCROs, a clear communication mechanism between MAST, the District Land Office and the villagers to explain the delays would have gone far to address the concerns of the villagers. Also, a more comprehensive and participatory VLUP could have created a more positive environment for MAST.

Another major observation of interest is related to the kinds of disputes that arose during or after MAST. Some of these were related to latent disputes that never became major concerns until MAST was introduced. In these cases, villagers suddenly realized that there was more at stake and wanted to defend their land more aggressively. Similarly, some opportunists attempted to claim more land than was theirs, assuming that if they could successfully defend their claims they would obtain legal protection via a CCRO. Thus, while CCROs are supposed to address the problem of land disputes, some disputes arose because of the CCROs. As one participant of GD remarked:

“... the exercise of formalizing land ownership via customary rights of occupancy has re-created a number of land ownership disputes. There are people who had abandoned their farms for a long time, and these farms were re-distributed to other villagers. When those who had abandoned their farms heard that land titles were going to be issued, the thought they could come back to take away those farms from current owners, and get land titles. That’s one reason disputes happened, and some villagers have disputes until now. Imagined that some people left their farms since 1965, 66, etc, and someone else was re-allocated that farm since may be 1970, 1974,

1978, etc. Suddenly, the one who had left the farm so many years ago, when s/he hears about land titles, and he comes back to the village and claims that this is his/her farm. This is one type of disputes that happened”.<sup>18</sup>

This and other similar experiences suggests that in addition to the sensitization and education program, a more thorough appraisal of these latent land disputes prior to the implementation of MAST could have helped proactively address, thus reducing the delays and possible negative connotations that may have been created related to MAST.

A final major observation is that resolving the aforementioned disputes involved an interplay between institutional-legal mechanisms (land laws, land tribunals, land courts, land department) and informal process (customary land authorities such as clan elders, elders of the family, etc...). For example, pastoralists mentioned that in negotiating their land rights they still move beyond the formal land use planning process, and engage with their neighbors in one-on-one negotiation related to certain rights, such as grazing their cattle in farm fields during the post-harvest season. Indeed, both the government land bureaucracy and the MAST project implementers could have benefited from learning from some of these influential customary land use institutions, values, and norms before the design and implementation of MAST.

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<sup>18</sup> A male participant of the pastoralist GD, Ilalasila village, MAST Group Discussions, Cross-Section of Land Users, October, 2015

## ANNEX A: TABLE OF FINDINGS FOR QUESTION I(A)

**Was the mapping and verification process seen as transparent and participatory?**

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for effects/changes	Attribution by Respondents	Deviance
Most parcel owners - and the land users who share borders with them - participated in the mapping and verification of their parcels and their neighbors' parcels		Most parcels were mapped with the consent of the owners and all land users who share borders with them	<ul style="list-style-type: none"> <li>• Sensitization and seminars before mapping prepared villagers;</li> <li>• MAST mandatory requirement for the presence of owners and their neighbors as a pre-requisite for mapping to happen</li> </ul>	All GDs and Klls agreed	None
	Mapping and verification of some parcels was delayed or revoked due to disputes, some of which were caused by individuals who did not participate fully in the pre-mapping and verification activities	<p>Border disputes that arose during mapping (see next table on disputes)</p> <ul style="list-style-type: none"> <li>• Absentees who disputed ownership after the process of mapping and verification (see next table on disputes)</li> </ul>	<ul style="list-style-type: none"> <li>• Land disputes that were not resolved prior to MAST mapping and verification</li> <li>• The possibility of legal certificates created negative incentives for some opportunists to claim land that is not theirs</li> <li>• Absentee land-owners/claimants who delayed or disputed the process</li> <li>• Possibly inadequate sensitization made some villagers miss the preparatory activities (meetings, seminars) which affected their attitudes during the mapping and verification process</li> </ul>	All GDs and Klls agreed	None
	Concerns about the pre-existing	<ul style="list-style-type: none"> <li>• Dissatisfaction by some pastoralists</li> </ul>	<ul style="list-style-type: none"> <li>• Possibly the VLUP was rushed to meet mandatory legal requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate mapping of</li> </ul>	None that was

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for effects/changes	Attribution by Respondents	Deviance
	Village Land Use Plan (VLUP) that preceded MAST mapping and verification of individual parcels	<p>about (i) the restrictive nature of the seasonal livestock water and pasture access plans, and (ii) specific spaces such as livestock corridors that had been identified but had not been mapped as part of the VLUP or issued collective CCRO, and were therefore subject to future invasions by other land users</p> <ul style="list-style-type: none"> <li>VLUP lack key public spaces such as open spaces for meetings, play grounds for children, adequate space allowances for future road/streets network in the designated settlement area. However, all land has already been documented (CCROs) as private parcels with no allowances for such future needs of public spaces</li> </ul>	for MAST (By law, a comprehensive VLUP has to precede mapping of individual parcels and issuance of CCROs). As a result, the VLUP was not adequately participatory, and there was not enough time to address all the concerns and needs, as the objective was to complete the VLUP so that MAST could start.	<p>pastoralists' land access in the VLUP was a major concern during the Pastoralists' GD in Ilalasimba. This was also raised in one neighboring village (Magubike);</p> <ul style="list-style-type: none"> <li>Inadequate mapping of future village infrastructure on the Land Use Plan was particularly raised by the Youths GD participants</li> </ul>	articulated well or supported by evidence

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for effects/changes	Attribution by Respondents	Deviance
	Youth concerns about the future (high) cost acquiring land due to CCROs	<ul style="list-style-type: none"> <li>• Youth claimed that buying a parcel to build a house is already more expensive due to CCROs (people know more about the value of their land)</li> <li>• Indirect evidence of increased value due to people who had abandoned their land parcels or sold them cheaply in the past and now attempted to reclaim them to get CCROs</li> </ul>	<p>The VLUP did not allocate reserve land for future needs, including the future needs of the youth, who currently don't have land Some youth from families who lack adequate land have not been issued CCROs under their parents' land</p> <ul style="list-style-type: none"> <li>• CCRO education has made people understand the value of the land – hence the high price</li> <li>• Transaction costs to purchase land have increased due to the involvement of more bureaucracy (village &amp; district)</li> </ul>	<p>Increased cost an value of land was a central topic of Youths GD &amp; mentioned during GD for cross-section of land users who have already received CCROs</p> <p>Increased value of the land was also associated with a rush to reclaim abandoned or cheaply sold land; this was reported by the Land Users GD, village council and land committee GD, youths, women and pastoralists GDs, as well as KII with village leaders and villagers with land disputes</p>	None

## ANNEX B: TABLE OF FINDINGS FOR QUESTION I (B)

**What disputes arose in the course of mapping and verification, and were these disputes resolved fairly?**

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for success or lack of it	Attribution by Respondents	Deviance
During MAST seminars Villagers and Village Land Tribunal members were trained on the land law and dispute resolution, and were therefore prepared for MAST dispute resolution		<ul style="list-style-type: none"> <li>• Some disputes, particularly boundary disputes, were resolved on the spot</li> <li>• Some disputes were resolved by the Village Land Tribunals and/or family members in time for mapping of the parcels in dispute to continue</li> <li>• Of the disputes that arose, relatively few remain unresolved or their resolution was considered unfair by one of those involved</li> </ul>	<ul style="list-style-type: none"> <li>• The presence of customary (elders within family, clan, etc.) and statutory (land tribunals) institutions for conflict resolution, including village land tribunals, facilitated timely conflict resolutions</li> <li>• Seminars before mapping prepared villagers and the Village Land Tribunal on how to resolve disputes using the land-laws</li> <li>• MAST requirement for the presence of owners and their neighbors as a pre-requisite for mapping to happen allowed all the owners to discuss their boundary problems with their neighbors until they all agreed – which avoided potential disputes, and resolves some of the disputes on the spot and allowed mapping to continue</li> </ul>	All GDs & KIIs in Ilalasimba mentioned MAST education training villagers about the Land Law and/or dispute resolution; and the actual practice of dispute resolution during MAST mapping	None
	<ul style="list-style-type: none"> <li>• Mapping and</li> </ul>	<ul style="list-style-type: none"> <li>• Some border disputes</li> </ul>	<ul style="list-style-type: none"> <li>• Land disputes that were not</li> </ul>	All GDs & KIIs at	During

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for success or lack of it	Attribution by Respondents	Deviance
	<p>verification of some parcels was delayed or revoked due to disputes</p> <ul style="list-style-type: none"> <li>Some resolutions were considered unfair</li> </ul>	<p>(between neighboring parcel owners) that arose during mapping</p> <ul style="list-style-type: none"> <li>Ownership disputes that arose during or after mapping</li> <li>Some disputes appeared resolved, however one of the parties was still not satisfied (considered the resolution unfair)</li> </ul>	<p>resolved prior to MAST mapping and verification.</p> <ul style="list-style-type: none"> <li>The possibility of CCROs created negative incentives for some opportunists to claim land that is not theirs</li> <li>Absentee land-owners/claimants who delayed or disputed the process</li> <li>Disagreements between the claimants and the village land dispute resolution authorities</li> <li>Attitudes of some claimants who lost land cases (the MAST education on land laws had not managed to change their attitudes regarding fairness based on traditional beliefs rather than land laws)</li> </ul>	<p>the village level acknowledged various types of land disputes that occurred during MAST.</p> <p>The general agreement is that the disputes were resolved fairly – land law was applied, and all conflicting parties were involved</p>	<p>pastoralist GDs some disputes were reported where those involved are not satisfied with the outcome. Also, pastoralists were concerned that areas designated for pastoralist use have been zoned during land use planning, but not mapped and titled (collective title) during MAST, and so could be disputed in the future</p>

## ANNEX C: TABLE OF FINDINGS FOR QUESTION I(C)

**Were the data collected by MAST sufficient to allow for the issuance of CCROs?**

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for effects/changes	Attribution by Respondents	Deviance
Nearly all land parcels in the village have been completely mapped and registered for the issuance of CCROs		No parcel has been reported to have been un-registered or de-registered because of insufficient data	The project involved the district land officers (as consultants) in designing the mapping process, and involved the district and village authorities before, during, and after the mapping. This ensured that all the data and information required by the legal and bureaucratic process for issuing CCROs was taken into account.	KII at the district land office and those at the village (village leaders) agree that data was sufficient to issue CCROs	District level KII suggest some parcels were not mapped, or were unregistered or de-registered. This, however, was not because of incomplete data, but due to disputes
	<ul style="list-style-type: none"> <li>• Less than 20 out of the expected nearly 900 CCROs had been issued during this research.</li> <li>• Unregistered or de-registered parcels for CCRO issuance</li> </ul>	<ul style="list-style-type: none"> <li>• Reportedly there are a few parcels that have not been registered for issuing CCROs</li> <li>• Registration of a few parcels has been revoked due to disputes [If we treat the disputed claims as incomplete data]</li> </ul>	<ul style="list-style-type: none"> <li>• The delay in issuing CCROs is not due to lack of data, but due to the bureaucratic process for issuing CCROs at the District Land Office (But we consider data management, including the bureaucracy involved to be part of the process)</li> <li>• Disputes that were not resolved timely so that the parcels could be registered for CCROs issuance</li> </ul>	Both KIIs at the district and village levels indicate that the delay in issuing the remaining CCROs was not due to MAST process, but due to the bureaucratic process for land registration at the district level	District level KII suggest some parcels were not mapped, or were unregistered or de-registered. This, however, was not because of incomplete data, but due to disputes

## ANNEX D: TABLE OF FINDINGS FOR QUESTION 1(D)

**Did MAST outreach and communications activities inform and educate users of land in Ilalasimba on the appropriate land laws and related processes?**

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for success or lack of it	Attribution by Respondents	Deviance
<ul style="list-style-type: none"> <li>• Seminars were conducted to inform villagers and village leaders;</li> <li>• Before the seminars a Village Assembly was conducted to sensitize the villagers about the coming seminars;</li> </ul>		<ul style="list-style-type: none"> <li>• Land Laws and Land Rights Seminars (including related to CCROs) were reported by villagers as highly beneficial activities conducted for the village government (Village Council), Village Land Committee, Village Land Tribunal, and villagers</li> <li>• During MAST, Women, widows, youths and other vulnerable groups have been registered for CCROs after being sensitized by the seminars on land laws and their land rights</li> </ul>	<ul style="list-style-type: none"> <li>• Involvement of the district land officers (as the experts on village land law) in preparing and presenting seminars</li> <li>• Sensitization of villagers before the actual seminars – via the Village Assembly, the highest meeting in the village that is by law open to all adult villagers (over 18 years of age).</li> <li>• Seminars were conducted at the sub-village (Hamlet) level which encouraged broader participation</li> <li>• Incentives (meals and allowances) were provided to encourage villagers to participate as they had to give up their daily chores to attend the seminars</li> </ul>	<p>There was great agreement across GDs and KIs that MAST seminars played a great role in educating villagers about land laws &amp; the MAST process. This led to a more positive perception of MAST , increased informed participation, and dispelled misinformation about MAST being a land grab</p>	<p>All women participants within the of ‘land users who have obtained CCROs’ GD failed to attend the seminars due to household chores. This phenomenon is not replicated in other groups, and suggests the negative effect of disproportionate household chores on women in their participation in development projects like MAST</p>
	Some	<ul style="list-style-type: none"> <li>• Some villagers did not</li> </ul>	<ul style="list-style-type: none"> <li>• Not adequate sensitization as</li> </ul>	The youth GD	

Positive Findings	Negative Findings	Evidence of (+ and -) effects/changes	Reason for success or lack of it	Attribution by Respondents	Deviance
	villagers were unable to participate in MAST seminars	attend seminars <ul style="list-style-type: none"> <li>• Some villagers attended only part of the seminars</li> </ul>	not everyone attended the Village Assembly where the sensitization happened (door to door sensitization could do a better job) <ul style="list-style-type: none"> <li>• Inadequate resources (e.g. not enough food and other facilities at the seminar location) prevented some villagers, particularly women with small children, from attending</li> </ul>	were particularly critical of the low sensitization of villagers prior to the seminars – which they attribute to reduced seminar attendance Village leaders KII also acknowledged inadequate sensitization of villagers – which led to reduced seminar participation	