



**THE WORLD BANK**  
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Impact evaluation of the Improvement of Land Governance in  
Uganda to Increase Productivity of Small-Scale Farmers on *Mailo-*  
Land (ILGU)

**Baseline Data Collection 2017**

**Study Documentation**

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## List of Acronyms

CAPI- Computer Aided Personal Interviews

CoO – Certificate of Occupancy

EA- Enumeration Areas

HQ- Head Quarters

HHID- Household Identification code PID- Personal Identification code

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## 1.0 Background

Uganda has a complex land tenure system. Four tenure systems officially recognized by the 1995 Constitution coexist: freehold, *mailo*, leasehold, and customary tenure. While undocumented customary tenure dominates in the country (UNPS 2013/2014 data estimates that 84% of parcels are held customarily), *mailo* tenure is predominant in the central and parts of the western regions. Around 10% of Uganda's land (in surface) is estimated to be held under *mailo* tenure. The 1998 Land Act recognizes the rights of *mailo* tenants (lawful occupants as well as bonafide occupants) to occupy that land in perpetuity for as long as they continue to pay the annual ground rent to the registered owner. By law, tenants by occupancy has the right to assign, sublet, pledge, sub-divide, bequeath, or create third party rights in the land. The existence of various consent requirements and rights of first refusal in the law seek to balance the rights of *mailo* tenants and owners, but which did not work in practice resulting in overlapping rights between owners and tenants.

The overlap of ownership and use rights on *mailo* land has been identified as a key impediment to investment and improved productive efficiency in Uganda's agricultural economy. Previous studies have shown that *mailo* "occupancy rights convey significantly lower incentives to invest in trees, soil conservation, and manure application than full ownership.

To address the issue of securing rights of *mailo* tenants in a way that can increase the level of investment by smallholders, access to credit and boost agricultural productivity, GIZ developed a pilot program to test approaches for systematic demarcation and adjudication of *mailo* land occupied by tenants in the form of land inventories in 8 sub-counties in Mityana and Mubende districts.<sup>1</sup>

### 1.1 Study Objectives

The proposed impact evaluation of the delivery of land inventories to *mailo* land tenants will serve multiple objectives:

- a) Gain better understanding of the impacts of strengthening tenants' rights in Mityana and Mubende districts. Findings are to provide critical information necessary to understand and quantify both expected impacts and risks associated with the program. Results are to be disaggregated by gender.
- b) Identify best practices as well as potential issues in the implementation process and provide recommendations to inform the design of a subsequent national roll-out to cover *mailo* land but also similar tenure arrangements in Uganda such as Native Freeholds and Church's land.
- c) Evaluation of the complementary intervention aimed at converting land inventories into certificates of occupancy (CoO)/*mailo* title will help identify the best incentives for registration of CoO/*mailo* title as well as the benefits associated to registration vs. demarcation on key outcome variables (investment, land management, agricultural productivity).
- d) Inform potential new donors' engagement in support to the implementation of the National Land Policy's strategic objectives.

### 1.2 Survey Design

The sample design for this evaluation is geographic discontinuity based on sub-county borders. The counterfactual group was selected from enumeration areas (EAs) bordering the sub-counties already selected for implementation, which will allow for a robust comparison between smallholders participating in the program and "non-treated" smallholders in the neighboring county whose land

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<sup>1</sup> In Mubende District, privately owned *mailo* land covers 249,000 Ha (54%), freehold grants 1,400 ha (0.3%); Kingship (Kabaka) *mailo* land 1,400 Ha (0.3%). In Mityana District, privately owned *mailo* land covers 123,400 Ha (77.0%) and Kingship *mailo* 2,200 Ha (1.4%).

will not be surveyed by the GIZ project. Treatment sub-counties were purposefully selected. Villages are then selected on both sides of the treatment sub-counties on the assumption that households living on both sides of the border are similar in observable and unobservable characteristics, this latter assumption being the key for geographic discontinuity design.

A listing was conducted in **200 Enumeration Areas** randomly selected from UBOS EA maps around the sub-county borders. The listing identified *mailo* tenants who cultivate land in the EA of residence as well as their landlords (when these are known). The number of occupants interviewed were randomly drawn from the listing data stratified by tenant type (i.e., Tenant-cum-owner and pure tenant). Sample size per village was 15; 8 were allocated to tenant-cum-owners and 7 were allocated to pure tenants. In cases where there was more than the sample size in each category, selection was done at random. However, if any group had less than the required sampling number then all of them were sampled and the remaining were replaced by the other group. The baseline survey was conducted once the listing data became available to stratify and draw the sample resulting in a total sample size of **2800 households**.

## 2.0 Survey Questionnaire – Review of Sections

The Survey comprised three questionnaires namely;

1. Household Questionnaire
2. Agriculture questionnaire
3. Landlord Questionnaire.

Each of the questionnaires had varying sections and questions, and below we review these sections.

### 2.1 Household Questionnaire

#### Section 1A: Household Identification Particulars

Information in this section was provided to the field teams by the staff at the Headquarters (HQ) before starting data collection including the names and codes pertaining to the selected Enumeration Areas (EAs). An EA generally does not have its own name but is commonly known by the name of the Local Council 1 (LC1) that it is associated with.

#### Section 2 Household Roster

The purpose of this section is to:

1. Identify all persons who are members of the household;
2. Provide basic demographic information such as age, sex and marital status of each household member.

The respondent for this section was mainly the household head. In the absence of the household head the next person who is acting as household head would be interviewed. It was a requirement that respondents must be a usual member of the household and should be capable of providing all the necessary information about other members of the household. Other household members also provide information or details on particular questions concerning them if present at the time of the visit.

A household was defined as a group of people who normally live and eat their meals together for at least 6 months of the 12 months preceding the interview. Therefore, the member of the household is defined on the basis of how long they have lived in the household.

### Section 3 Education and Health

The purpose of this section was to measure the level of education or formal schooling of all household members and the health for each individual. The minimum respondent age for this section was 3 years and above.

Information was mainly collected on;

1. The literacy status of household members – i.e. member of the household who could read and write.
2. The educational attainment of each respondent and the type of school attended.
3. Health of household members during the past 6 months.

### Section 4 Wage Employment and Non-Market Labor Activities

This section covered wage employment for each household member over 10 years of age. This included wages, salary, in-kind payment in agricultural or non-agricultural activities, seasonal or not, including domestic work in the last 12 months.

This section goes on to break down the activities by ISO and time spent.

### Section 5 Housing Conditions Water and Sanitation

Data from this section was aimed at measuring the parcel/property ownership status and socio-economic status of household by assessing the quality of housing occupied and the tenure surrounding the property. Information was collected on the type of dwelling, tenure status, parcel size, how parcel was acquired, when parcel was acquired, parcel ownership rights, landlord or kibanja holder, parcel disputes and access to basic services (including water, electricity and sanitation).

A dwelling was defined as a building or a group of buildings in which the household lived. It could be a hut, a group of huts, a single house, a group of houses, etc.

### Section 6 Sources of Income financial decision making, savings, credit, borrowing and banking

This section gathered information on the following:

1. Sources of income and decision making at household level.
2. Financial savings and investments.
3. Access to and utilization use of mobile money services.

### Section 7 Credit

In Relation to 6 above, this gathers information on Potential borrowing sources for different household members.

### Section 8 Details of Loan Applications

This section covers the details of loans applied for by any Household member, either jointly or singly in the last 12 months.

## Section 9 Non-Crop farming household enterprise/activities

This section collected information on the presence of non-agricultural household enterprises. It includes information on income and employment derived from non- agricultural household enterprises and identifies the household member responsible for each enterprise in terms of decision making and the allocation of income generated. It also covered the involvement of household enterprises in the credit market. The respondent for each enterprise was a member of the household most knowledgeable about the activities of the enterprise.

## Section 10 Household Assets

This section aimed at collecting data to estimate the value of household assets. It also collected information on ownership of assets.

## Section 11 Shocks and Coping Strategies

Shocks were defined as events that happen suddenly. Usually they have a marked beginning and end. While they last for a short time, a few days or weeks, usually their effects are felt for a longer time. It was noted that a shock can be household specific or community wide. Examples of shocks include floods, livestock disease, fire, etc. For example, petty theft of household property was not considered as a shock.

This section gathered information on which shocks/ distress events affected the households in the last 12 months.

## Section 12 Welfare and Food Security

The purpose of this section was to collect information on vital needs and living conditions of households during the last 12 months. It provided additional information to assess household welfare. Food security was defined as the availability of food and one's access to it. Some questions regarding daily meals had a 24-hour recall period.

## Section 13A decision making, bargaining and social capital -- male respondent

This section was asked separately to the male respondent. It sought to collect information on social capital that is involvement and belonging to groups such as; religious, farmers, cooperatives and the respondent's frequency of involvement in the same. It also covers decision making on a number of decision items at the household.

## Section 13B decision making, bargaining and social capital -- female respondent

This section was asked separately to the female respondent. It sought to collect information on social capital that is involvement and belonging to groups such as; religious, farmers, cooperatives and the respondent's frequency of involvement in the same. It also covers decision making on a number of decision items at the household.

## Section 14A Gender Perceptions, Legal Knowledge and Conflicts – Male respondent

This section was specific to the male respondent and it collected information on legal knowledge, through scenario-based questions and hypothetical examples on both gender and legal knowledge specific to *mailo* land. It also covered conflict issues and conflict mitigation.

## Section 14B Gender Perceptions, Legal Knowledge and Conflicts – Female respondent

This section was specific to the female respondent and it collected information on legal knowledge, through scenario-based questions and hypothetical examples on both gender and legal knowledge specific to *mailo* land. It also covered conflict issues and conflict mitigation.

*Table 1 Organization of Household Questionnaire*

<b>Name</b>	<b>Module name</b>	<b>Level of Analysis</b>	<b>Identification variable</b>
GSEC1	Household Identification	Household	hh
GSEC2	Household Roster	Individual	hh, pid
GSEC3	Education and Health	Individual	hh,pid
GSEC4	Wage Employment	Individual	hh,pid
GSEC5	Housing Conditions, water and Sanitation	Household	hh
GSEC6	Sources of income, Savings, credit	Household	hh
GSEC7a	Credit	Household	hh
GSEC7b	Credit	Borrowing_source	hh, borrowng_src__id
GSEC8	Loans	Loan	hh, loan_appns__id
GSEC9a	Non Crop Farming Enterprise	Household	hh
GSEC9b	Non Crop Farming Enterprise	Enterprise	hh, rs12__id
GSEC10	Household Assets	Asset	hh, rs14__id
GSEC11	Shocks and Coping Strategies	Shocks	hh, rs16__id
GSEC12	Welfare and food security	Household	hh
GSEC13a	Decision Making, Bargaining and Social Capital -Male Respondent	Decision Item	hh,items_decision__id
GSEC13b	Decision Making, Bargaining and Social Capital -Female Respondent	Decision Item	hh, items_decision_female__id
GSEC13c	Decision Making, Bargaining and Social Capital -Male Respondent	Office	hh, office_lst_male__id
GSEC13d	Decision Making, Bargaining and Social Capital -Female Respondent	Office	hh, office_lst_female__id
GSEC13e	Decision Making, Bargaining and Social Capital -Male Respondent	Local Organisation	hh, local_orgns_male__id
GSEC13e	Decision Making, Bargaining and Social Capital -Female Respondent	Local Organisation	hh, local_orgns_female__id
GSEC14	Gender Perceptions and Legal Knowledge	Household	hh

## Section 19 Link to Agricultural Questionnaire

The purpose of this section was to assist the enumerator in determining which households would require agriculture and/or livestock questionnaires.

This Module focused on the first cropping season on the year 2017, that is January 2017 to June 2017. For Livestock the reference period was the last 12 months.

## Section AG2 current land holdings - owned and access rights

The purpose of this section is to have a complete list of all the parcels owned and/or operated by the household during the season Jan-June 2017. It allows us to refer back to these parcels in the next sections of the questionnaire, together with the rights under which they are held and their current use. It is divided into two different parts. The first, Part A, collects information on parcels of land owned by the household.

The second, Part B, collects information on parcels of land that the household has use rights/usufruct only while the ownership right belongs to someone else.

This section is administered to households who have been involved in crop farming during the cropping season January to June 2017. Information was collected on agricultural land that these households had access during the reference period. Issues of land tenure status and land user rights were also investigated.

## Section AG 3A & B Agricultural and Labor Inputs

This section collected information on non-labor and labor input applications at the parcel- plot level during the first cropping season of 2017 (January–June 2017) for part A (owned) and B (use rights), respectively.

## Section AG 4A & B Crops Grown and Types Of Seeds Used

The purpose of this section was to collect information on crop cover of parcels farmed by the household. Data was collected on crops planted by the household during the first cropping season of 2017 (January–June 2017) on each plot in parcels accessed by the household through ownership or user rights, in part A and B, respectively.

## Section AG 5A & B Quantification Of Production

Information on agricultural production is collected at the parcel-plot-crop level separately for the first cropping season of 2017 (January–June 2017) in part A and B, respectively. This section also collects data on how the household used the harvested produce.

## Section AG 6A, B & C Livestock

The data on the ownership of (i) cattle and pack animals, (ii) small animals, and (iii) poultry and other animals was solicited in sections 6A, 6B, and 6C, respectively. Each section collects information on the dynamics of household livestock ownership at animal-type level over a given reference period, earnings from animal sales, and expenditures on animal purchases. If the household cared for animals that belonged to others, interviewers were instructed to record only ownership, sales and purchases of animals the household was entitled to keep; for instance, the young goats or sheep that the household keeps in return for caring the flock.

## Section AG 7 Livestock Production

This section collected information on the production and sales of livestock by-products. The reference period was last 12 months for livestock and three months for poultry. These are covered in different sections (7A-7B) including production of Meat, Milk, respectively.

## Section AG 8 Animal Power

This section collected information on Dung and Animal power. For any animal type raised by the households, it asks about the use of the products and the earnings from the sales or the rent of the service.

## Section AG 9 Extension Services

The section collected information on agricultural technology and extension services. It covered access to extension services and demand for agricultural technology.

Extension workers were defined as individuals employed by the government or non- governmental organizations who work as an agricultural development agent for contacting and demonstrating improved farming methods to farmers. They are responsible for organizing, disseminating, guiding and introducing technical methods in agricultural production directly to farmers, and for facilitating farmers coming into contact with cultivation methods to promote agricultural production.

## Section AG 10 Farm Implements and Machinery

This section collected information on agricultural implements and machinery. It collects information in regard to ownership and estimated value both in cash and in-kind of the implements and it has a reference period of 12 months.

## Section AG 11 Land Market and Related activities

Reference period here was past 5 years. This section collected information on land market (sold, given away as inheritance or gift or donation, lost due to expropriation) of land.

*Table 2 Organization of Agriculture Questionnaire*

ASEC1	Link with Agriculture Questionnaire	Household	hh
ASEC2A	Current Land holdings, Owned	Parcel	hh, parcelId
ASEC2B	Current Land holdings, Access rights	Parcel	hh, parcelId
ASEC3A	Agricultural and Labour Inputs- Owned Parcels	Plot	hh, parcelId plotId
ASEC3B	Agricultural and Labour Inputs- Access rights Parcels	Plot	hh, parcelId plotId
ASEC3A_33	Labour Inputs- Owned Parcels	Individual, plot	lp_fam_labour_3b__id, plotId, parcelId, s1aq01b, hh
ASEC3A_33_a	Labour Inputs-Access rights Parcels	Individual, plot	lp_fam_labour_3b__id, plotId, parcelId, hh

ASEC4A	Crops grown and Types of Seeds used -Owned Parcels	Crop	cropId, plotId, parcelId, hh
ASEC4A_1	Crops grown and Types of Seeds used -Access rights Parcels	Crop	cropId, plotId, parcelId, hh
ASEC5A	Quantification of Production-Owned Parcels	Crop	cropId, plotId, parcelId, hh
ASEC5B	Quantification of Production-Access Parcels	Crop	cropId, plotId, parcelId, hh
ASEC6A	Cattle and Pack Animals	Animal	hh ,s6a_roster__id
ASEC6B	Small animals	Animal	hh ,s6b_roster__id
ASEC6C	Poultry & Others	Poultry	hh ,s6c_roster__id
ASEC7A	Livestock Production -Meat	Livestock	hh ,s7a_roster__id
ASEC7B	Livestock Production -Milk		hh ,s7b_roster__id
ASEC8A	Animal Power	Animal	hh ,s11_roster__id
ASEC9	Extension Services	Household	hh
ASEC9_Ext	Extension Services	Extension Service	hh ,s9_roster__id
ASEC10	Farm Implements and Machinery	Machinery	hh ,s10_roster__id
ASEC11	Land Market and Related Activities	Household	hh

### 3.0 Training and Field Work Organization

Prior to starting data collection, field staff were trained for a period of approximately two weeks with practical sessions to introduce the concept of CAPI (Computer Assisted Personal Interviews) using survey solutions.

The field teams comprised of a driver, a supervisor, and four enumerators. Each enumerator had a tablet and each supervisor had either a tablet or a computer (laptop). All data was captured directly on tablets using Survey solutions. The data collected was electronically sent to Headquarters at the conclusion of interviews for each EA.

As the survey was conducted through CAPI, the survey routing and many of the survey logic checks were automated and completed during fieldwork.

Field work started on the 23<sup>rd</sup> of August 2017 and ended on the 1<sup>st</sup> of February 2018.

#### 3.1 Response Rate

The response rate was 91%.

#### 3.2 Data Cleaning

The data cleaning process was done in a number of stages. The first step was to ensure proper quality control during the fieldwork to ensure the accuracy of the final dataset. This included daily checks once data was submitted to the server. Each team of enumerators received comments for any data discrepancies through the survey solutions web portal straight to their tablets.

These comments were specific to each question and more so, each questions instance. Errors that were caught at the fieldwork stage were corrected based on re-visits to the household on the instruction of the supervisor. The data that had gone through this first stage of cleaning was then sent from the field to the head office of UBOS where a second stage of data cleaning was undertaken. During the second stage the data were examined for out of range values and outliers.

The data were also examined for missing information for required variables, and sections, Any problems found were then reported back to the supervisors where the correction was then made. This was an ongoing process until all data were delivered to the head office.

After all the data were received by the head office, there was an overall review of the data to identify outliers and other errors on the complete set of data. Where problems were identified, this was reported to the supervisors.

The questionnaires were checked and where necessary the relevant households were revisited, and a report sent back to the head office with the corrections.

### 3.3 Merge data with Listing

The final stage of the cleaning process was to ensure that the household- and individual-level datasets were correctly merged across all sections of the household questionnaire. Specifically, all household data was matched with Listing and Sampling file data for traceability.

## 4.0 Producers

The PIs for this study are Daniel Ali Ayalew, Klaus Deininger and Thea Hilhorst from the World Bank.

This work was supported by German Agency for International Development (GIZ) and the World Bank.

Data collection was done by a team from Uganda Bureau of Statistics.

## 5.0 Accessibility

Access Authority is the World Bank

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