



# Land Governance in an Interconnected World

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY  
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## LAND ADMINISTRATION DOMAIN MODEL (LADM) AND ITS CONTRIBUTION TO MONITORING OF LAND GOVERNANCE IN UGANDA

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## **Abstract**

Increasing pressure on land resources requires development and implementation of policies and laws across the continuum of land rights to ensure the security of land rights, address poverty eradication, gender equality, indigenous recognition, adequate housing, sustainable agriculture, food security, climate change response and good governance in accordance with global, regional principles. The Ministry of Lands, Housing and Urban Development (MLHUD) is currently implementing a digital National Land Information System (NLIS) compliant with the ISO Standard 19152 - Land Administration Domain Model (LADM). The LADM provides a standardized global vocabulary for land administration and helps to provide accurate and real-time indicators to strengthen Land Governance Monitoring towards the effective implementation of the Sustainable Development Goals (SDG) to inform, monitor and evaluate land-related policies, legislation, and procedures.



## INTRODUCTION

Rapidly increasing pressure on land associated with population growth and demands for renewable and non-renewable resources requires the active development and implementation of policies across the continuum of land rights to ensure the security of land rights, to facilitate land access and to deal with external factors (du Plessis 2014). Changes and variations in the socioeconomic context require constant development and refinement of land-related policies and legislation to adequately address poverty eradication, gender equality, indigenous recognition, adequate housing, sustainable agriculture, food security, climate change response and good governance (Deininger 2014). Development partners including the World Bank have provided support for a series of land reform measures across Africa over the past two decades. In response to increased demands for accountability, development partners are more interested in examining ways to monitor and evaluate the impact of their interventions as governments explore ways to improve efficiency and improve service delivery.

International and regional principles such as the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT)<sup>1</sup> and the Framework and Guidelines on Land Policy in Africa (F&G)<sup>2</sup> have been established to guide the development, implementation, and monitoring of national-level policies and legislation. The Government of Uganda is a signatory to these conventions and is currently leading the region in the strengthening Land Governance Monitoring toward the effective implementation of the Sustainable Development Goals (SDG) to inform, monitor and evaluate land related policies, legislation, and procedures. The SDGs are a collection of 17 interrelated global goals set by the United Nations covering a broad range of social and economic development issues including poverty, hunger, health, education, climate change, gender equality, water, sanitation, energy, environment and social justice. While Goal 15 of the SDGs focusses specifically on land to protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss; the majority of the other SDGs are very closely interrelated with land and depend heavily on effective and sustainable land governance.

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<sup>1</sup> Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, Food and Agriculture Organization of The United Nations, Rome, 2012;  
<sup>2</sup> Africa Union, African Development Bank and Economic Commission for Africa, Framework and Guidelines on Land Policy in Africa, Land Policy in Africa: A Framework to Strengthen Land Rights, Enhance Productivity and Secure Livelihoods, September 2010.



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To develop efficient and sustainable policies; monitor compliance with international standards and principles, and evaluate the effectiveness of the financial support provided to make land governance more responsive to social and environmental needs, there is an urgent need to understand better and quantify land governance, fine-tune and measure the impact of interventions in this sector.

## **Land Governance and Data**

Land governance in Uganda has experienced a series of changes and developments over the past three decades as efforts have been made to optimize processes and improve land tenure security and the delivery of land governance services across the country in line with international standards, principles, and practices. The full and effective implementation of existing legislation including the 1995 Constitution, 1998 Land Act, and subsequent legislative amendments, along with the 2013 National Land Policy has faced some challenges associated with lack of resources and capacity.

Land registration and administration, survey and mapping, land valuation and physical planning were for over a century based on a hard-copy paper manual system. The system was time-consuming and prone to error. It was difficult to extract even the most basic data relating to gender disaggregation in let alone more specific details relating to land ownership for instance whether plots were held in the names of an individual, family or other legal entity.

It has been equally challenging to identify trends in land transactions and property markets. Data was not only difficult to capture and manage it was also quickly out of date. Another challenge is that over 80 percent of land in Uganda remains un-surveyed and unregistered. In fact, recent studies suggest that in rural areas less than two percent of plots across northern Uganda have been registered (Burke, 2014). Little detailed information is known about the ownership, use and control of unregistered land commonly subject to customary tenure arrangements that are experiencing change concurrent with the broader social-economic changes in Uganda today. In the absence of timely, accurate and detailed information, it can be extremely difficult if not impossible to develop and refine appropriate policies and laws, let alone monitor and evaluate the implementation or impact of interventions intended to strengthen land tenure security across Uganda.

A Government report prepared by the Ministry of Gender, Labour and Social Development in 2009 suggested women's ownership of registered land across all of Uganda was 20 percent (the Republic of



Uganda, 2011). The Uganda Bureau of Statistics (UBOS) Uganda Demographic and Health Survey 2011 study found approximately 39 percent of women in Uganda own land either alone or jointly under both statutory and customary tenure, but with significant differences across the country and depending on age, education whether they are in urban and rural environments (the Republic of Uganda and ICF International, 2012).

A prominent study published by the Makerere Institute of Social Research (MISR) in 2004 examining 93,146 Government registered mailo, leasehold and freehold titles issued between 1980 and 2002 reported that men held 63 percent of the titles and only 16 percent were held by women only (Sebina-Zziwa 2004). These figures have been widely quoted by a large number of other studies focused on this issue (Wengi, 2011; Rugadya and Kamusiime 2009; Assimwe 2002). The study report disaggregated the data that a number of titles held by men only decreased from 72 percent in 1980-1985 to 55 percent in 1998-2002 while the proportion of titles held by women only increased during the same period from 12 percent to 17 percent (Sebina-Zziwa 2004). The report also submitted that women's involvement in statutory registered land transactions (comprising women only and joint ownership) averaged 37 percent increase from 31 percent in 1980-1985 to 41 percent in 1998-2002 (Sebina-Zziwa 2004). The report attributes the increases observed over the period studied to the government's gender empowerment drive" (Sebina-Zziwa 2004). These reports demonstrate a steady growth in women's ownership of registered land in Uganda: significantly higher than figures put forward for the global average between 1 to 7 percent (Cohen 2013, Madeley 2010, Benschop and Sait 2006, Ekass and Cooke and Moore 2004, Steinzor 2003). Nonetheless, precise and accurate data on the disaggregation of land tenure by gender remains elusive.

## **Modernization of the Land Sector**

A number of very innovative initiatives are currently underway in Uganda that will provide the government and administration with accurate data and information on the use, control and ownership of land in Uganda and monitor and evaluate compliance with global, regional and national rules, principles, and procedures. In 2009 the Government of Uganda received financial support from the World Bank under the Second Private Sector Competitiveness Project (PSCP II) to reduce the cost of doing business and to encourage investment while enabling the private sector to be better positioned to respond to investment and export opportunities.



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Following the successful implementation of the pilot Design, Supply, Installation, Implementation of the Land Information System and Securing of Land Records (DeSILISoR) Project 2010 to 2013 (Gil 2012), the Government of Uganda commenced the implementation of a five-year programme for the Design, Supply, Installation and Implementation of National Land Information System Infrastructure (DeSINLISI) in 2015 with support from the World Bank (Oput, Milledroques and Burke 2018). The programme aims to establish a National Land Information System (NLIS) that fully integrates land registration, land administration, surveying and mapping, physical planning and valuation. The NLIS will deliver a semi-decentralized architecture to serve 21 Ministry Zonal Offices (MZOs) across Uganda, Uganda Land Commission and Government valuation department all integrated and managed by a central location in the National Land Information Centre (NLIC). By the end of 2017, ten MZOs are functional, and the remaining MZO's are on schedule for completion through 2018 (Oput, Milledroques and Burke 2018).

## **Monitoring Land Indicators**

This paper and the associated presentation describe the advantages of having a LADM-compliant system with the capacity to provide accurate information and governance monitoring indicators. The importance of reliable information is especially crucial to monitor the Sustainable Development Goals (SMG) achievement progress, and the direct monitoring impact is on the targets 1.4 and 5A:

*Target 1.4* “By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance” with the indicator 1.4.2 “Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure.

*Target 5A* “Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws” with the indicator 5.A.1 “(a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure.”

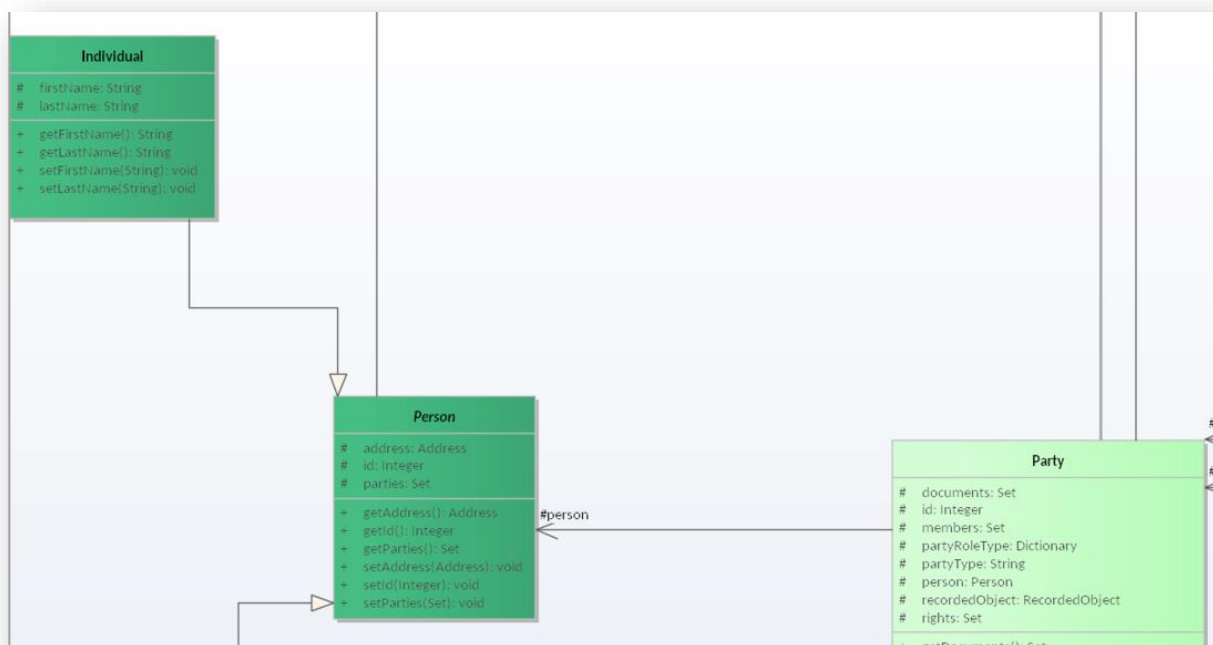


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During the phase 1 of the project, the system was based on a draft version of LADM, and some of the relevant information necessary to get the indicators to measure the goals were not mandatory to capture that later resulted in an incomplete set of reporting for the evaluation of the SGD compliance.



**Figure 1 Sample of Class implementation in DeSiLiSOR (phase I)**

The remaining attributes were customized as extensions of the model and in most of the cases were not mandatory.

During the phase 2, the project took a different approach starting on the definition of a Country Profile that extended the basic classes of LADM and incorporated necessary attributes in the correspondent classes and relations to get the information. The country profile took into account all the elements needed to ensure the availability of information required to get the necessary indicators to evaluate the targets.





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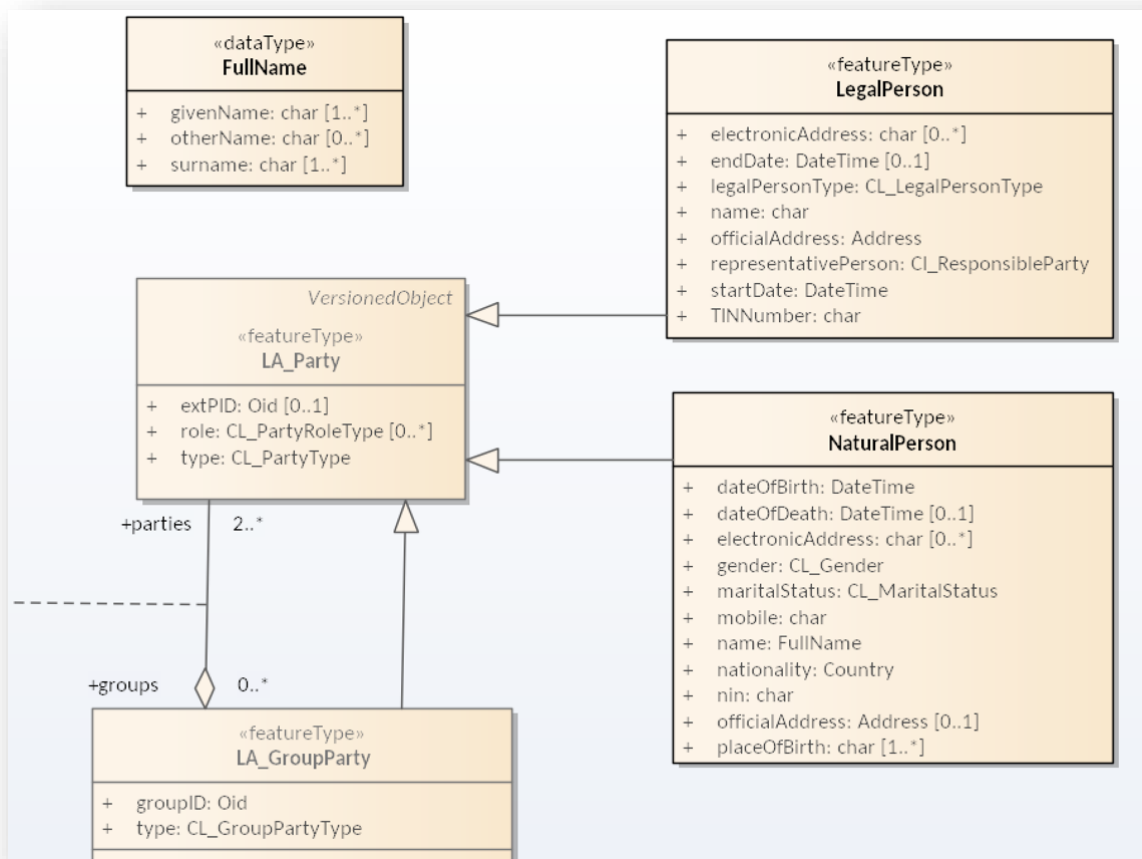


Figure 2 Sample of classes defined for the Country Profile (Phase 2)

The improved organization of classes and the implementation of the LADM within the country profile facilitates the collection of necessary information in a more clear and clean manner and the opportunity to obtain information more accurate from the model without the trouble of digging in a complex set of relationships when the data is not organized correctly.

```
1 select p.Name as Name, coalesce(nullif(i.Gender.Code, ''), 'unknown') as Gender,
2 filetype.Code as TenureType, t.District.Label as County, t.Region.Label as District, t.Cadregion.Label as CadastralDistrict
3 from ug.model.Transaction t join t.Titles title join title.Filetype filetype join t.Parties p, ug.model.Individual i
4 where i.Id=p.Person.Id and t.Region.Label like ?
5 and t.TransactionStatus.Code<>'transaction_withdrawn'
6 and t.RegistrationDate in (select max(tpr.RegistrationDate) from ug.model.Transaction tpr join tpr.Titles tl
7 where tl.Id=title.Id and tpr.IsInactive is false and tpr.TransactionStatus.Code='transaction_completed' )
8 and ((t.TransactionType.RightType='right_type_ownership' and p.PartyRoleType.Code in ('party_role_type_grantee', 'party_role_type_lessee')
9 or (t.TransactionType.RightType='right_type_sublease' and p.PartyRoleType.Code in ('party_role_type_sublessee', 'party_role_type_lessee')
10 or (t.TransactionType.RightType='right_type_lease' and p.PartyRoleType.Code in ('party_role_type_lessee', 'party_role_type_lessee'))
11 order by t.Region.Label, t.Cadregion.Label
```

Figure 3 sample of an HQL to pull information from the model (properties by gender)





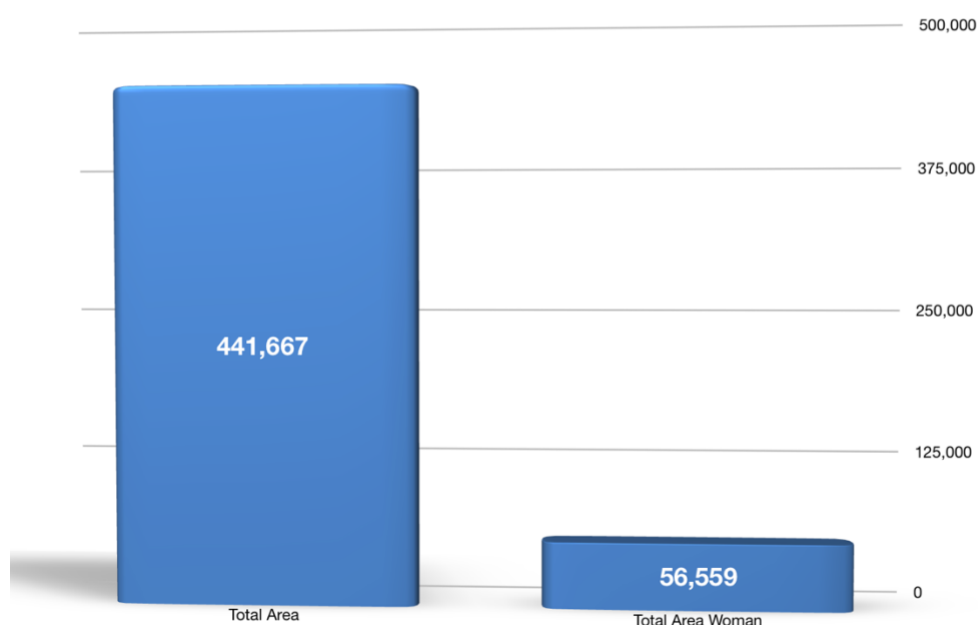
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What is important to notice in the code above is the natural description of the query and proper usage of the parties to identify the gender and get the necessary information to get the indicators.

## Area registered in the name of Woman



**Figure 4 Relation of Agricultural Registered area in the name of Women (in Ha)**

Below is some additional information from the system on the registered property that provides insights into the initial results of the investigations. Notice that there are still several titles where the ownership gender is marked as unknown as the information was not captured at the beginning of Phase I; however, the current activities are also focused on updating the required information to complete the information set. With the current approach, once the data is completely depurated, it will be possible to evaluate the indicators in real time at the country level or by zones, districts, counties or sub-counties.



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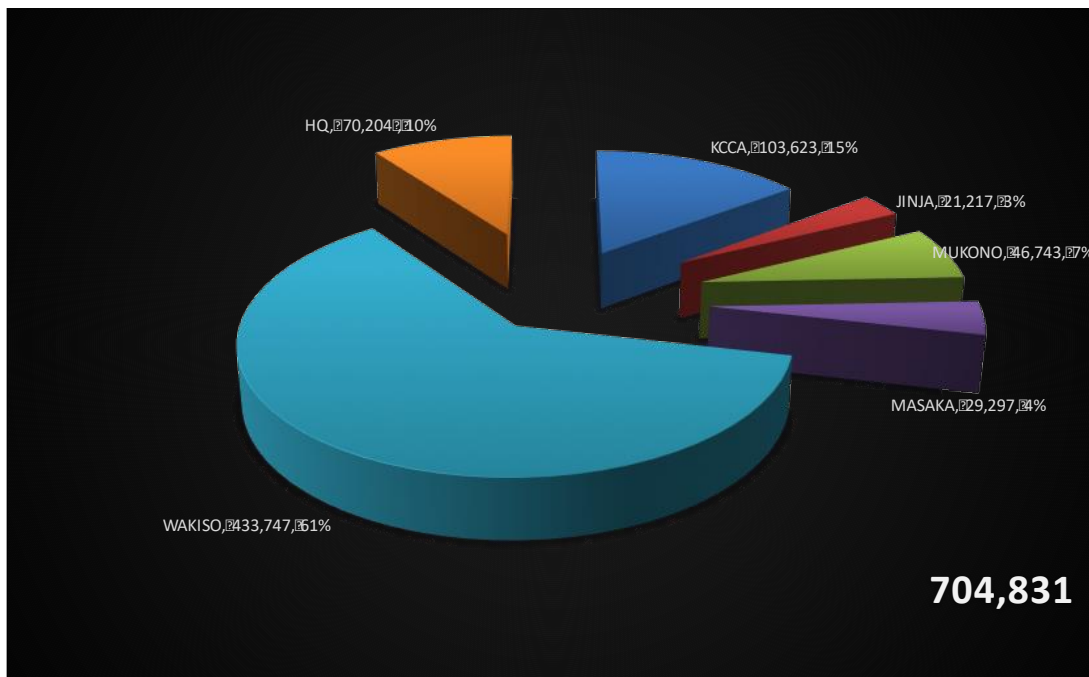


Figure 5 Registered Titles

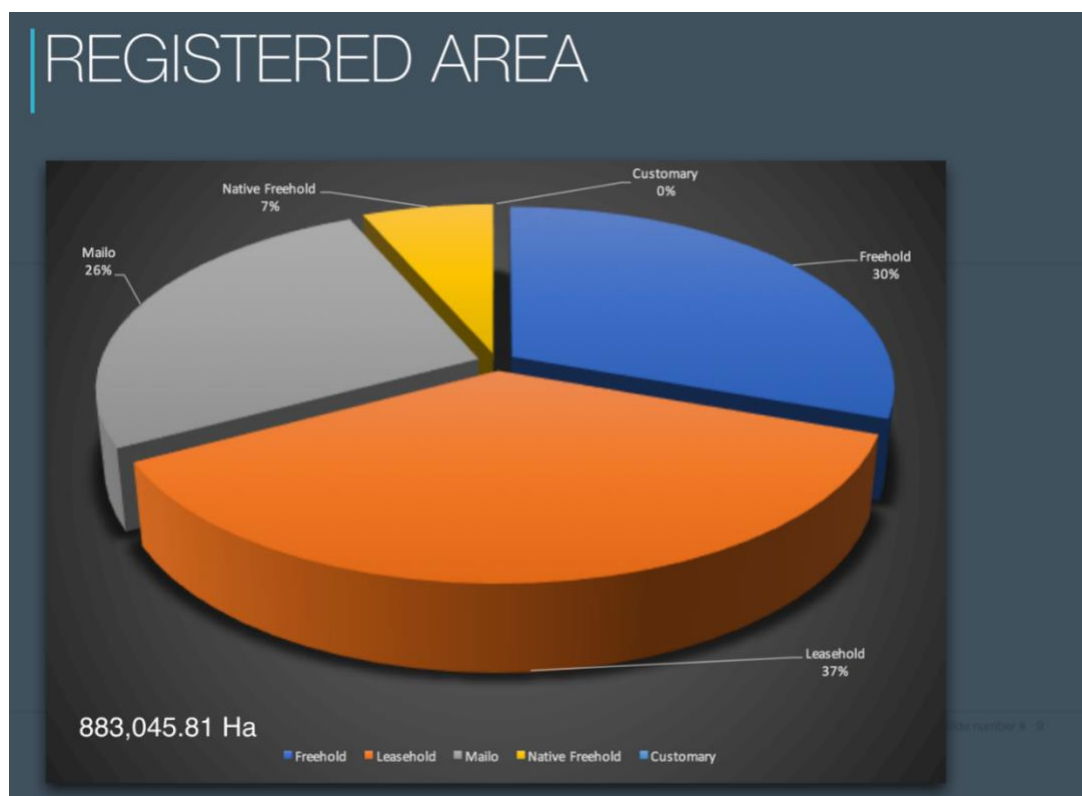


Figure 6 Total area of registered land



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The new system applies to freehold, leasehold, mailo titles and certificates of customary ownership (CCOs). It incorporates the functionalities for valuation assessments, physical planning, and district land management decisions; prevent encroachment on wetlands, forests, road reserves and other public land reserves; reduces the time required to check, update and transfer land; increases the security of land tenure, and contributes to a reduction of corruption.

The NLIS will also comprise of information relating to national parks, forest reserves, rivers, lakes and wetlands managed under the Ministry of Agriculture Animal Industry & Fisheries and the Ministry of Water and Environment. This information will be crucial in monitoring the protection, restoration and promotion, and the sustainable use of terrestrial ecosystems, management of forests, combatting desertification, halting and reversing land degradation and stopping biodiversity loss under Goal 15 of the Sustainable Development Goals (SDGs).

The NLIS provides the Government of Uganda with accurate and real-time indicators to strengthen Land Governance Monitoring toward the effective implementation of the Sustainable Development Goals (SDG) land indicators. This provides the government with an opportunity to monitor and make adjustments to improve the implementation of land sector-related policies in accordance with efforts promoted by the United Nations on the implementation of the 2030 Agenda for Sustainable Development. The implementation of the LADM within the Land Information System provides an accurate understanding of the composition of registered land including information on land ownership by gender, location and areas of land surveyed and registered, numbers and types of land transactions in different parts of the country in addition to detailed insights into the use, control and ownership of land by different sectors of the society. The LADM will also capture customary and communal land through the registration of Certificates of Customary Ownership (CCOs) and Communal Land Associations (CLAs).

Efforts are now underway to scale up the implementation of CCOs and CLAs which is expected to make a significant contribution making the demarcation and registration of land accessible to the broader population and facilitate the capture of a much more comprehensive set of data concerning land ownership, use, control and access across the country. Another initiative currently underway is the Systematic Land Adjudication and Certification (SLAAC) to survey and register land across the country systematically. The development and streamlining of government land management practices, improvements to accessibility by the public through MZOs and the promotion of affordable land tenure documentation such as CCOS,



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CLAs and SLAAC is expected to promote the surveying and registration of land across the country improving the security of tenure for all Ugandans.

The integration of additional data such CCO and CLAs along with national parks, forest reserves, rivers, lakes and wetlands managed will be deepened under the third phase of the NLIS implementation as the system is expand beyond the Ministry Zonal Offices to the District and Sub-County levels of government across the countries and additional government ministries including the Ministry of Agriculture Animal Industry & Fisheries and the Ministry of Water and Environment along with the relevant associated agencies such as National Environment Management Agency (NEMA), Uganda Forestry Authority (NFA) and the Uganda Wildlife Authority (UWA) are provided with direct and interactive access to the system without compromising the security of the vital land tenure information and data within the NLIS.

## **Conclusion**

The NLIS automatically provides the Government with accurate real-time data and information on an extensive range of topics significantly strengthening governance monitoring including the metrics for the Doing Business and Sustainable Development Goal (SDG) indicators in comparison with the former paper-based manual processes that were costly, extremely tedious, time-consuming and vulnerable to error. The availability of this data and information will significantly strengthen the Government of Uganda's capacity to more efficiently implement National Land Policy and where necessary to adjust existing land-related legislation based on accurate evidence to improve service delivery in the land sector and improve equitable land tenure security across Uganda.



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