The growing population and the increased family lineage have been unstoppable over the years evidenced by the national census and population projections. This has encouraged the subdivision of land to accommodate the increasing households which have led to the reduction of land sizes and the changes in the land usage. There has been a need to assess the household land sizes and uses and its effect on food security in order to provide solutions to the frequent problems of hunger and over dependency on the government to provide relief food aid and avoid malnutrition and resultant deaths.

The objectives of the study were to examine the current household land sizes and usage in the study area while assessing its impacts on food production and security. Analysis was done on the factors that influence the size and usage and take into consideration the processes of intergenerational transmission of land rights and usage. The study sought to assess the impact of land size and use on food security in the maize farming system of Uasin Gishu County using Leseru sub-location in Kamagut ward as a case study. Uasin Gishu County is one of the country's major food baskets and a leader in maize production due to its reliable rainfall patterns and productive land. The study targeted 1016 households in Leseru sub-location, Uasin Gishu County that have lived in the area for a period not less than three (3) years. The study used the survey method whereby data was obtained through household and 10 key informant interviews, observations, 3 focus group discussions, photography and review of existing documents. A sample size of 152 people was used and a sampling method which involved purposive sampling, convenient sampling as well as simple random sampling was applied in selecting the case study, formulating clusters and administering household questionnaires respectively.

The findings from the study enumerated that majority of the land holding sizes ranged between 2-5 acres with the land usage being agricultural particularly maize farming. The impacts of land sizes were that the households with larger land sizes had better chances of food security whereas mechanization and economies of scale played a key role in food production. Population growth and the geographical location of the land are some of the factors that influenced the size and use of land. The study presented models indicating the settlement pattern which affected land sizes and usage which include scattered, linear, clustered and communal settlement model. The hypothesis of the study concluded that there was no significant relationship between the household land size and food security in the study area whereas a significant relationship was found between land usage and food sufficiency. The recommendations of the study were to implement the communal settlement model, consider doing appropriate zoning, implementation of the national land use policy and government consideration to provide subsidies and incentives to the farmers.