

**MAPPING LAND USE AND FARM TYPES IN SOUTH WESTERN  
UGANDA: A CASE STUDY OF MUKO AND KATAGATA CATCHMENT  
AREAS IN KABALE DISTRICT**

**BY**

**BAGUMA PAUL,**

**B.S.C. EDUC (HONS), (BIO/CHE). MAK.**

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## **Abstract**

The study entitled mapping land use/land cover and farm types in the selected catchments of Muko and Katagata was carried out in South Western Uganda in Kabale district. Muko catchment is located in Rubanda East County in Muko Sub-County while Kitagata is located in Rubanda West County in the sub-counties of Bubaale, Hamurwa, Ikumba and Muko. There is little spatial data available in Uganda in a form that can be used to influence decisions at both the community and district levels. The purpose of this study was to map the land use/land cover classes, farming system enterprises and farm types at a more detailed spatial scale at the catchment levels of Muko and Katagata in order to establish the land use/land cover classes, farming systems and farm types database that will help to inform policy makers in better land use planning in the study area.

The physical factors considered in the study were altitude, aspect, slope, and topography. Altitude was determined using a Global Positioning System (GPS). Topography was determined by field observations. Slope steepness was determined using a clinometers. Aspect was determined using a compass. Soil horizons were determined using pits. Data was collected using ground truth data sheet and a structured questionnaire. Statistical Data Analysis was conducted using SPSS were extensive uses of parametric and non parametric methods were employed. Data on land use and farm types was analyzed in a GIS environment in Arc view and ILWIS.

Of all the four physical factors considered topography was the most significant factor in influencing land use/land cover in both catchment areas. The study revealed that 4 farm types were derived and mapped in each catchment, whose distribution within the catchments was not statistically significant. The study

further mapped land use/land cover of the main crops grown in the catchment areas for terrestrial cultivated managed areas using classifiers like main crop, crop type, crop combination and life form.

It can be generally conclude from the study that the land use patterns in the two catchment areas were not the same. This was mainly due to differences in physical and social factors observed between the two catchments. Further research should be conducted into the possibility of intensifying horticultural production in Muko since it has favorable climatic conditions. The study recommends that environmental and natural features which influence growth and development or contribute to the overall quality of life in both catchments should be inventoried and mapped for better policy decisions in conservation of natural resources and increased agricultural production. Implementation of Geographical Information Systems should be emphasized to support sustainable development in improving

land management and policy-making at the local community level in South  
Western Uganda.