

# **Land Cover and Land Use Change Analysis: Its Impacts on Rangeland Ecosystems in Kakooge County, Nakasongola District, Uganda.**

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**Citation:** Mbaziira, J., 2019. Land cover and land use change analysis: Its impacts on rangeland ecosystems in Kakooge County, Nakasongola district, Uganda.

## **Abstract**

The paper presents and reviews the land cover and land use changes within a rangeland ecosystem and their impacts for a period of 18 years (1987–2005) in Nakasongola district, specifically, Kakooge County. The study used ArcGIS 10.2 data, field observations and community perceptions. Results showed a typical change in built areas, bush lands and subsistence farmlands expanded by 822.2% in 1987 and 61.7% in 2015, while commercial farmland, forest plantations, wetlands and woodland declined by 1.5%, 67.5%, 37.6% and 6.5% respectively. The changes in land cover and land uses originated from poverty, charcoal production, occurrence of drought, and introduction of pine plantations by 41%, 37%, 55% and 50%. Similarly, this resulted into frequent droughts, reduced soil productivity, food insecurity, and wood fuel crisis by 98%, 67%, 33%, and 36%, respectively. There was also general decline of land holding per household from 1.6ha to 1.5ha. Thus, such cumulative effects contribute to rangeland degradation calling for appropriate management measures like strengthening environmental monitoring and ecosystem conservation strategies, extending poverty alleviation programmes and integrating of tree planting into the farming system in a more collaborative way to halt the outpacing impacts.

**Keywords:** Rangelands, Ecosystem, Land Cover, Land Use Change.