

# **An assessment of perceptions towards land degradation in Kasikeu Division, Makueni County, Kenya**

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## **Abstract:**

This study was conducted in Kasikeu Division, Makueni County, Kenya between August 2010 and December 2010. The main objective of this study was to assess the perceptions and attitudes towards land degradation. Survey research design was used in order to take into account the different human activities and how they influence land degradation. The study relied mainly on cross-sectional primary data, which were collected from the three locations (Kiou, Mumela and Kasikeu) in the division. The study used multistage and simple random sampling methods to select the households for study. The primary data were obtained with the aid of semi-structured questionnaires. Interviews with farmers and agricultural officers in the division were conducted in order to get information on agricultural production. Secondary information from scientific journals, books, and conference proceedings was obtained. The data analysis for this study was conducted using descriptive statistics, correlation analyses and regression analyses. The results showed that the following indicators of land degradation were commonly observed in the study area; rills, gullies, pedestals, armour layer, soil accumulation around clumps of vegetation, soil deposits on gentle slopes, exposed roots, muddy water, sedimentation in streams and rivers, sandy layers, furrows in clay soils and ripples in sandy soils, barren spots, change in vegetation species, decrease in organic matter, increased runoff, reduced soil water and reduced rooting depth. The direct human activities which were found to be influencing land degradation in the study area include; deforestation, clearing of vegetation, overgrazing, steep slope cultivation, and improper fertilizer use. Land shortage, poverty and high population density are the underlying causes of land degradation observed in the study area. According to the results, the consequences of land degradation experienced in the study area include; decline in crop yields, lowering of the water table, increased inputs and greater costs, reduced responses to inputs, reduced productivity on irrigated land, loss of water for irrigation, diversion of resources to reclamation, lower and less reliable food supplies and increased labour requirements. The study concludes that anthropogenic factors are significantly responsible for land degradation and this degradation has negatively affected livelihood in the region. In order to mitigate this land degradation and its consequent effects, the study recommended a need for the government to enforce effective policies to control and prevent land degradation and these policies should be predictable, credible and reliable. The study also recommended a significant investment to be made by the government through promotion of land use systems that provide permanent vegetative cover to protect the soil, increase fertility and optimize water penetration. Soil conservation technologies that are known to work in severely degraded lands should also be assessed and evaluated with a view to exploring the possibility of transferring them in other areas with similar settings particularly in Kasikeu Division. Long term training programmes on soil conservation among farmers should also be implemented to enhance sustainable agricultural land management.