
Land Use, Ecology, and Socio-economic Changes in a Pastoral Production System

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ABSTRACT This study was conducted in the northern part of Kenya, in Kakuma division, Turkana district. Kakuma is a semi-arid area under nomadic pastoralism as the main activity. The presence of a refugee camp has attracted many people from within the Turkana community and also the outside community. The study aimed at documenting the effects of emergent land use changes on vegetation resources and the socio-economic environment in Kakuma. Data on vegetation density and cover was collected. Socio-economic data was collected from the local Turkana population and the settlement camp. The data was analysed using SPSS computer package and descriptive statistics. There was a significant difference ($P < 0.05$) in vegetation cover and density with increasing distance away from the settlement camp. The mean tree crown cover was low near the settlement camp (6.2%) but high away from the settlement camp (57.7%). Mean tree density was high near the settlement camp (13 individuals/ 100m²). Shrub crown cover was low (0.9%) in the areas that had settlements. The need for fencing and building materials was the main cause of low shrub cover. The density of the shrub species generally increased as one moved away from the settlement camp (17 individuals/ 16m²). Herb species cover and density was high near the settlement camp (68% and 202 individuals/ 1m² respectively) but this comprised mostly of species unpalatable to livestock like *Tribulus terrestris* and *Portulaca oleraceae*. The study revealed that droughts and livestock raids in the previous years had set in motion social and ecological changes. The loss of livestock through raids and droughts encouraged sedenterization. This affected the cultural patterns and has had an effect on the rangeland condition. Lack of mobility concentrated livestock in specific areas, thus depleting the forage resources and creating conditions for soil erosion. Trading activities between the refugees and the Turkana had both positive and negative impact on the economic, social and cultural setup of the local community. The increase in population around Kakuma and the settlement camp has set in motion changes that have affected vegetation and social structures. The immediate social and economic returns from the exploitation of resources have overridden the long-term benefits. In regard to this there is a need for education on the impacts, both short-term and long-term, of the various activities on the vegetation, livestock resources and also the pastoral lifestyle.

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